CENTRAL AMERICA
WEST INDIES & SOUTH AMERICA

H. W. BATES

00084808

Jamsetjee N. Tata.

BOMBAY BRANCH
OF THE
Royal Asiatic Society.

Digitized with financial assistance from the
Government of Maharashtra
on 18 July, 2018

STANFORD'S COMPENDIUM

OF

GEOGRAPHY AND TRAVEL

FOR GENERAL READING

BASED ON HELLWALD'S 'DIE ERDE UND IHRE VÖLKER'

TRANSLATED BY A. H. KEANE, B.A.

THE CATHEDRAL OF MEXICO. *Frontispiece*

STANFORD'S

COMPENDIUM OF GEOGRAPHY AND TRAVEL

BASED ON HELLWALD'S 'DIE ERDE UND IHRE VÖLKER'

CENTRAL AMERICA

THE WEST INDIES

AND

848

SOUTH AMERICA

EDITED AND EXTENDED

BY H. W. BATES,

ASSISTANT-SECRETARY OF THE ROYAL GEOGRAPHICAL SOCIETY;
AUTHOR OF 'THE NATURALIST ON THE RIVER AMAZONS'

WITH

ETHNOLOGICAL APPENDIX BY A. H. KEANE, M.A.I.

MAPS AND ILLUSTRATIONS

X-f-43

THIRD EDITION

LONDON

EDWARD STANFORD, 55, CHARING CROSS, S.W.

1885

917.28
Bat/cer-
84808

917.297.
918

00084808

PREFACE.

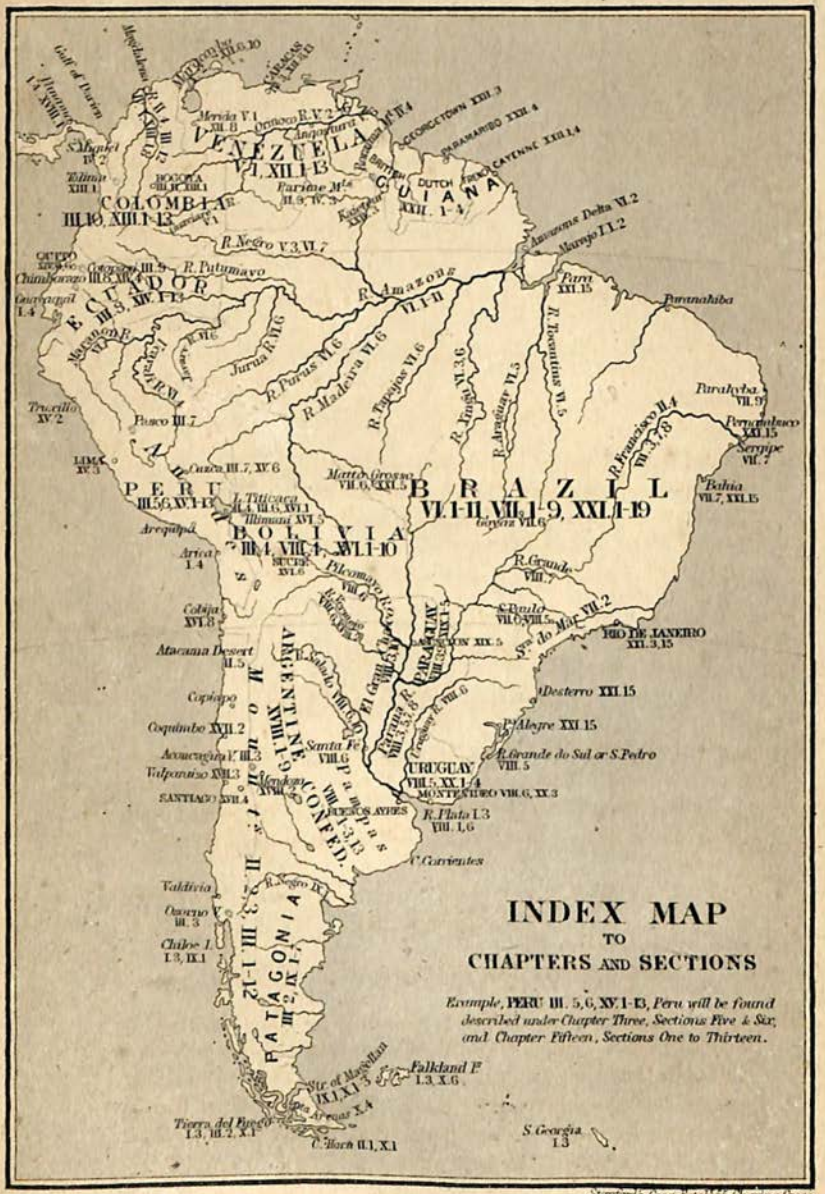
In the present volume it has been the chief object of the Editor to adapt Von Hellwald's admirably-written survey of the countries treated of, to the presumed requirements of English readers. To this end the information contained in the works of many recent British travellers, overlooked by the German author, or published since his volume appeared, has been utilised, and statistical details corrected throughout in accordance with the most recent accessible data. In other respects the chief alterations introduced have been in reference to Natural History and the Geographical Relations of Faunas and Floras. Wherever these important subjects were treated of by Von Hellwald, it appeared to the Editor that the facts and their applications were not given with the accuracy which is noticeable in other portions of his work, and it was found necessary, therefore, wholly to recast these sections. In doing this, however, nothing has been introduced but what is likely to be perfectly intelligible and interesting to the general reader.

With the exception of some alterations in the description of those parts of South America with which the Editor

is personally familiar, no other considerable change has been made in the original work, of which even the opinions on political and social questions in the different countries have been retained. It should be mentioned, however, that Mr. Keane, in his translation, which has so well preserved the elegance of style for which Von Hellwald is distinguished in his own country, has largely condensed many parts of the book, and that other matter, embodying new information, has been in many places inserted, thus restoring the volume to more than its original bulk.

H. W. B.

LONDON, *May* 1878.


INDEX MAP
TO
CHAPTERS AND SECTIONS
Example, PERU III. 5, 6, XV. 1-13, Peru will be found described under Chapter Three, Sections Five & Six, and Chapter Fifteen, Sections One to Thirteen.
VENEZUELA
VI. 1, XII. 1-13
COLOMBIA
III. 10, XIII. 1-13
GUIANA
XXII. 1-4
ECUADOR
III. 9, XIV. 1-13
PERU
III. 5, 6, XV. 1-13
BOLIVIA
III. 4, VIII. 4, XVI. 1-10
BRAZIL
VI. 1-11, VII. 1-9, XXI. 1-19
ARGENTINE CONFED.
VIII. 1-9, XVIII. 1-13
PATAGONIA
III. 2-12, IX. 1-3
PARAGUAY
VIII. 1-5
URUGUAY
VIII. 5, XX. 1-4
Pampas
VIII. 1-3, 13
R. Negro V. 3, VI. 7
R. Amazons
R. Purus VI. 6
R. Madeira VI. 6
R. Tapajos VI. 6
R. Xingu VI. 3, 6
R. Araguay VI. 5
R. Tocantins VI. 5
R. Francisco II. 4
VII. 3, 7, 8
R. Parana VI. 2
R. Grande VIII. 7
S. Paulo VIII. 5
Sra do Mar VII. 2
RIO DE JANEIRO
XXI. 3, 15
Bahia
VII. 7, XXI. 15
Pernambuco
XXI. 15
Sergipe
VII. 7
Paraiba
VII. 9
Paranahiba
Para
XXI. 15
Marajo I. 1, 2
Amazons Delta VI. 2
Matto Grosso
VII. 6, XXI. 5
Cuzco III. 7, XV. 6
Pasco III. 7
Truxillo
XV. 2
LIMA
XV. 3
Arequipa
Arica
I. 4
Cobija
XVI. 8
Atacama Desert
II. 5
Copiapo
Coquimbo XVII. 2
Aconcagua V. III. 3
Valparaiso XVII. 3
SANTIAGO XVII. 4
Valdivia
Osorno V
III. 3
Chiloe I.
I. 3, IX. 1
Santa Fe
VIII. 6
BUENOS AYRES
R. Plata I. 3
VIII. 1, 6
C. Corrientes
Desterro XXI. 15
P. Alegre XXI. 15
R. Grande do Sul or S. Pedro
VIII. 5
MONTEVIDEO VIII. 6, XX. 3
Falkland I.
I. 3, X. 6
Str. of Magellan
IX. 1, X. 1-3
Tierra del Fuego
I. 3, III. 2, X. 1
C. Horn II. 1, X. 1
S. Georgia
I. 3
Stanford's Geog. Estab. 55 Charing Cross

CONTENTS.

CENTRAL AMERICA.

CHAPTER I.

CONFIGURATION OF THE LAND.

PAGE

General outlines—Atlantic and Pacific seaboards—Configuration of the interior—Mountains, Table-lands, and Plains—The Plateaus of Oaxaca and Anahuac—Mexican volcanic system—The Sierra Madre—Water system—General character of the Central American rivers 1

CHAPTER II.

THE INHABITANTS OF CENTRAL AMERICA.

Common points of resemblance between the Central and South American races—The Four leading Types—The Aborigines—The Indios Mansos and Barbaros—Temperament of the Red Man—The Mixed Races—The Mestizoes—The Zambos and Creoles . 12

CHAPTER III.

GOVERNMENT AND POPULATION OF MEXICO.

General outlines and extent—Political constitution—Population—The Mexican Indian Tribes—General aspect of the Mexican towns—The Capital and its Inhabitants—The Leperos—Physique—Dress—Social habits—Mexican Children—Food—The Tortillas—Education—Religion—Superstitions—State of the country—Brigandage—Politics—Public lotteries 24

CHAPTER IV.

Lower California.

PAGE

General outlines—Climate—Geological formation—Mountain system—Rivers—Harbours—Vegetation—Inhabitants—Population—Indians—Towns—San Diego—Lorete—Island of Carmen—Archipelago of Loreto—Sea-fowl—The capital, La Paz—Mineral wealth—San José del Cabo—Agriculture—Birds and Fishes . 37

CHAPTER V.

The Mexican Mainland.

Character of the coast—Mazatlan—Mazanillo—Road to Colima—Colima and neighbourhood—Guadalaxara—Condition of the province of Xalisco—Road from Guadalaxara to Guanaxuato—Guanaxuato and its Mines—The Capital—Romantic scenery—Interior of the city—The neighbourhood of the Capital—Vera Cruz—From Vera Cruz to Orizaba—The Barrancas—The Cofre de Perote—The Peak of Orizaba—The Valley of Puebla—The Anahuac Table-land—Popocatepetl 46

CHAPTER VI.

Physical Features of Mexico.

Climatic conditions—Vertical Zones of Climate—The Seasons—Distribution of the rainfall—Hot Springs—The Bramidos of Guanaxuato—Earthquakes—Minerals—Gold—Silver—Copper . 72

CHAPTER VII.

Politics in Mexico.

Government—Cause of the failure of Liberal Institutions—Political disorders—The Emperor Maximilian—Consequences of his fall—Recent Reforms—Obstacles in the way of real progress—The Legislative bodies—Political dishonesty—Social corruption—Gloomy prospects 82

CHAPTER VIII.

The Peninsula of Yucatan and British Honduras.

Physical aspect of Yucatan—Population—Products—Indian serfdom—Government—Commerce—The Capital—Social habits—Ancient Indian ruins—Uxmal—The Maya Indians and the Half-caste element—Belize, or British Honduras: Extent—Rivers—Exports—The Mahogany trade 87

CHAPTER IX.

GUATEMALA.

PAGE

Extent—Population—Configuration of the land—Lake Peten—Flores—The Golfo Dolce—The Carib Half-castes—River and Lake Izabal—Romantic forest scenery—The road to Gualan and the Capital—Climate—Soil—Products—The Coffee Region of the Pacific coast—Vegetation—Ornithology—Noxious insects—The Jigger—The old and new Capitals—Escuintla—The Quiché and other Indian Tribes—Old Cacique Families—Society in Guatemala—Class distinctions—Foreigners—Government—Politics—Liberal ideas—Material progress 97

CHAPTER X.

HONDURAS.

Outlines—General Physical features—The Plain of Comayagua—Mountain Ranges—Flora and Fauna—The Seaports of Truxillo and Amapala—Fonseca Bay—Inhabitants—Social habits—Degraded condition of the Women—The dead City of Copan . 112

CHAPTER XI.

SAN SALVADOR.

Geological formation—Volcanoes—The River Lempa—Products: Indigo, Caoutchouc, Balsam—Population—Reforms—Education . 118

CHAPTER XII.

NICARAGUA.

Climate and Geological features—Products—Cattle-breeding—Exports—Gold Mines of Chontales—Climate—The Mosquito Coast—Blewfields—Indian Tribes—Greytown—The River San Juan—Fauna and Flora—Upper course of the San Juan, and its tributaries—Castillo—The Indiarubber trade—San Carlos—Lake Nicaragua—City of Granada and its neighbourhood—Masaya, its Lake and Volcano—The Marabios—The Devil's Dance—Politics—Social obstacles to progress 121

CHAPTER XIII.

COSTA RICA.

Volcanic system—Rivers—Soil—Products—Mineral Wealth—Gold Mines—Population: Native and White elements—Prosperous state of the country—The Immigration question—The dark side of the picture 136

THE WEST INDIA ISLANDS.

CHAPTER I.

General Description of the West Indies.

PAGE

The Great and Lesser Antilles—Windward and Leeward groups—Geological features of the West Indies—Climate—Distribution of Temperature—The West Indian Hurricanes—Products of the Vegetable, Animal, and Mineral Kingdoms—Population: Indian, Negro, and White elements—Trade 141

CHAPTER II.

The Great Antilles.

Cuba—Extent—Mountain ranges—Coast line—Climate—Highways—Railroads—Political divisions of Cuba—The staples of trade—Sugar Plantations—Cigar Manufactories—Coffee—Population of Cuba: Spaniards, Creoles, Negroes, and Coolies—The City of Havana. Jamaica—General features—Rivers—Minerals—Population: Negroes and Jews. Hayti—General configuration—Mountain systems—Rivers—The two Republics of Hayti and San Domingo. Porto Rico—Karl Mauch's account of the Island and its Inhabitants 152

CHAPTER III.

The Lesser Antilles

St. Thomas—Santa Cruz—St. Bartholomew—Guadelupe—Pointe-à-Pitre—Basse Terre—Martinique—Barbadoes—Trinidad and its Asphalt Lake 176

SOUTH AMERICA.

CHAPTER I.

Outlines of the Coast.

PAGE

Points of resemblance between the three Southern Continents—Continuity of northern and eastern coast-lines—The Southern Seaboard—The Pacific Seaboard 189

CHAPTER II.

General Features of the Mainland.

Distribution of the Mountain Ranges—The Andes—The Eastern Slopes and the three great river systems—Other river systems—Absence of Lakes—The Atacama Desert and the Quebradas . 194

CHAPTER III.

The Cordilleras of the Andes.

Extent and main divisions—The Patagonian and Tierra del Fuego mountain systems—The Chilian Range—The Bolivian Andes—The Peruvian Ranges—The Interior of Peru—The Montaña—The Cuzco Range—The Cordilleras of Ecuador—Iliniza—Chimborazo—Tunguragua and Cotopaxi—The Guamani and Colombian Ranges—The Tequendama Falls—Geology of the Bogotá District Regions of the Magdalena and Atrato Rivers . . . 202

CHAPTER IV.

The Isolated Mountain Systems in the North of South America.

The Sierra of Santa Marta—The Region explored by Tetens in 1874—The three Venezuelan mountain systems—The Sierra de Parime and mountains of Guiana 220

CHAPTER V.

The Venezuelan Llanos and the Region of the Orinoco.

Extent of the Llanos—Their main features, as described by Don R. Paez—The Region of the Orinoco—Source and Course of the Orinoco—The Middle Orinoco: its Falls and Affluents—Orinoco scenery 225

CHAPTER VI.

The Region of the Amazons.

PAGE

Main divisions of the Amazons—The Amazons Delta—The Lower Amazons—The Upper Amazons—The tributaries of the Amazons: the Tocantins; the Tapajoz; Madeira; Purus and Jurua; the Rio Negro, Morona, and Ucayali—The Tras-Andina region—Vast extent of the Amazons water system—Its peculiar Fauna and Flora—Creeping Plants—Climbing Animals—Reptiles . . 236

CHAPTER VII.

The Interior of Brazil.

Still but little known—General configuration—The Serra Mantiqueira The Itatiaia—The Watershed of the Amazons and Plate River systems—Detached mountain systems—The primeval forest lands—The River San Francisco—Affluents, Falls, and Navigation of the River San Francisco—Climate and Temperature of Brazil . 251

CHAPTER VIII.

The Region of the River Plate and the Pampas.

Extent and configuration—Steppes and Woodlands—Main subdivisions—The Bolivian Plateau—The South American Mesopotamia—The La Plata water system—The Paraná-Paraguay river system—The Upper Paraná—The Paraguay and its Tributaries—The Indian hunting grounds of the Gran Chaco—Vegetation of the Gran Chaco: its Ornithology—Gran Chaco night scenery—The Argentine Pampas: their fascinating hold on the imagination; strange atmospheric effects 261

CHAPTER IX.

Patagonia.

Extent—General configuration—Lieutenant Musters' adventurous journey—The Tehuelche Indians—The Chenna Indians—Physical and moral features of the Patagonians: Dress, Habits, Amusements, Marriage customs, Religion, etc. . . . 275

CHAPTER X.

Strait of Magellan and Tierra del Fuego.

General description of the Archipelago: its Geology, Soil, Flora—The Strait of Magellan—Punta Arenas—The Tierra del Fuegian Indians—The Falkland Islands 290

CHAPTER XI.

The Latin Races in South America

PAGE

Relative proportion of Natives and Europeans—Causes of the partial failure of Latin civilisation in America—The Spanish and Portuguese elements in South America 299

CHAPTER XII.

Venezuela.

Unequal distribution of the temperature—The Hot, Temperate, and Cold Zones—Vegetation: Coffee, Cacao, Sugar, Cotton, etc.—Population—A Warning to intending Emigrants—Pursuits: Agriculture; Mining Industries—Trade—Exports—Imports—Highways—Projected Railways—The Postal Service—Culture—Universities—General state of Education—Relations of Church and State—Government—Constitution—Revenue—Public Debt, etc.—Political troubles—Caraccas, the seat of Government . 303

CHAPTER XIII.

United States of Colombia.

States of the Confederation—Extent—General configuration—Trade—Future prospects—Panama Railway—Aspinwall and Panama—The projected scheme of inter-oceanic Canalisation—Savanilla—The Magdalena water highway—Population—Cultivation—Primitive means of transit—Railway and Telegraphic systems—Public Instruction—Credit—Revenue—Foreign Trade—Civil dissensions—Constitution—Religion, etc. 317

CHAPTER XIV.

Ecuador.

Extent and Population—The Galapagos Islands—Seaports—Guayaquil—Scenery and Vegetation of the Interior—Peruvian bark—Cuenca and its Inhabitants—Quito—Manners of the People—Industries—The Animal Kingdom: Caymans and the Peccary—Flora: Cacao—Region of the Napo River—The Quijos, Zaparos, and Jivaros Indians—Theocratic Government—Exceptional relations of Church and State—Material progress—The Jesuit College—Spread of Education—Public highways—Mining and Agricultural operations 328

CHAPTER XV.

PERU.

PAGE

Extent and Population—Climate—Sublime coast scenery—Lima: its Inhabitants; Buildings; General aspect—Foreign element in Lima: the Blacks, Cholos, and Chinese Coolies—Cuzco, the ancient Capital of the Incas—Climate of Cuzco—Manners and habits of the people—The Quichua and Aymara Indians—The Native Clergy—Fauna: the Guanaco, Llama, and Vicuña—Mineral wealth—The Guano trade—Cotton—Government—Revolutions—Peculation—Present improved state of affairs—Public works—Railways 346

CHAPTER XVI.

BOLIVIA.

Population—Extent—Mountain systems—Lake Titicaca—A Salt Pampa—The Great Central Plateau—The city of La Paz—Sucre, and other towns—The Yungas district—Agriculture—Industries—Mining—Backward state of trade—Inhabitants—Various classes of Indians—The Quichua language—Manners and social vices—Revolutionary spirit 364

CHAPTER XVII.

CHILE.

Geological features—Mineral wealth—Valparaiso and neighbourhood—Juan Fernandez—Santiago de Chile—Inhabitants—Indians and Half-castes—The Whites—Social manners—The Land Question—Population — Emigration — Railway enterprise — Finance — Public instruction—Politics—Public spirit of the Aristocracy . 373

CHAPTER XVIII.

THE ARGENTINE CONFEDERATION.

Vast extent—Physical aspect—Minerals—Soil—Fossils—Climate—The Pampas—Rainfall—Vegetation—Inhabitants: Whites, Indians—Recent immigration from Europe—Landed proprietors and Labouring classes—Provincial towns—Buenos Ayres—The Gauchos—Material progress: Trade, Education, Agriculture, Cattle-breeding 385

CHAPTER XIX.

Paraguay.

PAGE

Limits—Physical aspect—Natural advantages—Population—Chequered history—Disastrous wars—The Guarani Indians—Asuncion—Paraguari—Railway travelling 397

CHAPTER XX.

Uruguay.

Physical aspect—Produce—Meat extract—Inhabitants—Occupations—Sheep farming—Monte Video and vicinity—Constitution—Stormy Politics—Deficit—Population 404

CHAPTER XXI.

The Empire of Brazil.

Points of contrast and resemblance to the United States—Extent Political divisions—Natural resources—Fauna—Cattle—Horses—Sheep-farming—Ornithology—Vegetation : valuable medicinal and other Plants—Vast mineral wealth—The Diamond fields—Population—Foreign and native elements—The civilised Indians—The wild Indians—Numerous Tribes—General classification—The Tupi, Parexis, Arawaks, and other independent tribes—The Portuguese—The Brazilians, properly so called—The Negroes—Slavery—Social Habits—The Capociragem—Murderous and suicidal manias—Half-castes : Mulattoes, Cruilos, Mestizoes, Cafusos, etc.—Recent European immigrants—German Settlements—Seaports : Pernambuco, Bahia, etc.—Bay and City of Rio Janeiro.—Romantic scenery—Sao Desterro—Diamantina—Government—Constitution—Religion—Provincial governments—Public instruction 408

CHAPTER XXII.

British, French, and Dutch Guiana.

Extent—Relative size of the three Colonies—Physical features—British Guiana—The Kaieteur Falls—Roraima—Surinam and Cayenne 436

APPENDIX BY A. H. KEANE.

ETHNOGRAPHY AND PHILOLOGY OF AMERICA.

PAGE

Introductory—Statistics—Problems—Origin of the Native Races and Civilisations—Physical characteristics of the Red man: mental attributes—Are the Aborigines one or many?—Languages—Polysynthesis—Consequences of Polysynthesis—Syncope—Letter-change—Evanescence—Vast number of the American Languages accounted for: their Classification—General Scheme of American Races and Languages: I. Sub-Arctic Races; II. Athabascan or Tinney Family; III. Algonquin Family; IV. Wyandot-Iroquois Family; V. Dacotah Family; VI. Appalachian Races; VII. Columbian Races; VIII. Californian Races; IX. Shoshone and Pawnee Families; X. New Mexican and Arizona Races; XI. Mexican Races; XII. Central American Races; XIII. Orinoco Races; XIV. Amazon Races; XV. Peruvian and Bolivian Races; XVI. Brazilian Races south of the Amazon; XVII. Southern Races 443

ALPHABETICAL LIST of all known American Tribes and Languages . 498

TABULATED SURVEYS.

Central American States 546

Principal West Indian Islands 548

South American States 555

LIST OF ILLUSTRATIONS.

The Cathedral of Mexico	*Frontispicce.*
Barrancas in Mexico	*To face page* 5
Indian Woman	*Page* 14
A Mestizo	,, 19
A Negro	,, 20
A Creole	,, 21
Promenade in Mexico	,, 29
Preparation of Tortillas	*To face page* 32
Volcan de Colima	*Page* 48
Cathedral of Guadalaxara	,, 54
Mercantile Bazaars	,, 60
Vera Cruz	,, 62
Peak of Orizaba	,, 66
Flores	,, 98
Guatemala	,, 106
Old Guatemala	,, 107
Gold Mine in hill country of Chontales	*To face page* 123
The River San Juan	*Page* 125
Indian Hut, Masaya	,, 133
West Indian Products	,, 147
Promenade in Cuba	*To face page* 152
Gardens of Cuba	*Page* 155
Chinese Coolies of Cuba	,, 158
Havana	*To face page* 159
Natives of Hayti	*Page* 169
St. Thomas	,, 176
Sugar Plantation in the Antilles	*To face page* 183
Trinidad	*Page* 184
Mouths of the Amazons	,, 189
Mount Sarmiento	,, 203
Pashiuba Palm Trees	*To face page* 211
Cotopaxi	*Page* 214
Pass in the Cordillera	*To face page* 218
On the Amazons	*Page* 236
Camping Ground on the Amazons	*To face page* 238
On the Rio Negro	*Page* 245

Primeval Forest	*To face page* 254
Tiger Island	*Page* 265
Vegetation in the Region of the Paraná	*To face page* 266
Patagonians travelling	*Page* 274
Guanaco and Ostrich Hunting	*To face page* 277
Patagonian Indians	,, ,, 282
A Patagonian Camp	*Page* 283
Punta Arenas	,, 294
The Coffee Plant	,, 304
Cacao Plantation	,, 305
Colombian Dwelling	,, 322
Quito	,, 335
Market Scene in Quito	,, 337
Napos Indian	,, 340
Lima Cathedral	,, 349
Cuzco	,, 354
Native Priests	,, 356
Guano Beds	,, 358
A Moxos Indian	,, 370
Mines of Caracoles	,, 374
Valparaiso	,, 376
Buenos Ayres	*To face page* 390
Street in Buenos Ayres	*Page* 391
Gaucho breaking in a Horse	*To face page* 392
A Gaucho	*Page* 393
Guarani Women	,, 400
Railway travelling	,, 402
Slaughter-House in Fray Bentos	,, 405
A Caioá Chief	*To face page* 417
Interior of Hut of Caioá Indians	,, ,, 419
A Brazilian Negro	*Page* 420
A Brazilian Negress	,, 421
A Mulatto	,, 425
Street in Bahia	,, 428
Bay of Rio Janeiro	*To face page* 430
Fruit-seller in Rio Janeiro	,, ,, 431
Cayenne	*Page* 440

LIST OF MAPS.

CENTRAL AMERICA.

Index Map to Chapters and Sections	*To face Contents.*	
Map of Mexico	*To face page*	1
Map of the West Indies and Central America	,, ,,	141

SOUTH AMERICA.

Index Map to Chapters and Sections	,, ,,	189
Physical Map of South America	,, ,,	195
General Political Map of South America	,, ,,	303
Map of the Railways of Peru	,, ,,	361
,, Chilé and Patagonia	,, ,,	373
,, The Rio de la Plata, etc.	,, ,,	385
,, The Seaports of Brazil	,, ,,	427
,, The Guianas	,, ,,	437

APPENDIX.

Ethnological and Philological Map of North America	,, ,,	443
,, ,, ,, South America	,, ,,	

London : Edward Stanford , 55 Charing Cross.

CENTRAL AMERICA.

CHAPTER I.

CONFIGURATION OF THE LAND.

1. *General Outlines—Atlantic and Pacific Seaboards.*

UNDER the title of Central America we include not only the smaller states of the Isthmus—Guatemala, Honduras, San Salvador, Nicaragua, Costa Rica, and British Honduras—but also Mexico proper; the whole forming a region upheaved by volcanic agencies, and tapering gradually from north to south. Thus defined it constitutes a natural division of the American land-mass, distinct both in a geographical and geological point of view from the broad continental expanses to the north and south of it. In area it is more than five times the size of Spain,—comprising 923,000 square miles.

Mexico, forming the first important link between the broad plains of the northern and the vast regions of the southern continent, is bordered on the east by the Atlantic Ocean, or more accurately by the Caribbean Sea, washing the island world of the West Indies, which revealed to the earliest discoverers the glories of the tropic lands of the New World. Rolling its billows still farther to the west this great inland sea forms the Gulf of Mexico, round which sweeps the mighty current of warm water coming from the equatorial zone of the Atlantic, and from this circumstance known as the Gulf Stream. On the west

the land is bathed by the waters of the Pacific Ocean here as well as along the whole western seaboard of the American continent far less varied by bights or inlets than the Atlantic. In fact, besides the shallow bay of Tehuantepec, there is little to break the straight continuity of the coast-line but the Gulf of California, shaping out the peninsula of Lower California, which appears as a long colossal rocky wall running nearly parallel with the coast of the mainland, and diversified by a few small bights, bluffs, and headlands.

All these Central American republics, Mexico included, resemble each other in their main features—in the physical aspect, conformation of the land, products of the animal and vegetable kingdoms, and in the mental, moral, social, and material condition of the inhabitants. The whole region finds its natural geographical termination in the Isthmus of Panama, though this strip of land itself belongs politically to South America.

The general outlines of either coast are but little varied. The uniformity of the Pacific seaboard has already been referred to. Besides the larger indentations already noticed, there is nothing calling for special mention except Fonseca Bay in Honduras, and the gulfs of Nicoya and Dulce in Costa Rica, producing a few peninsular formations mainly running from the north-west to the south-east. More diversified, however, is the Atlantic coast, where we at all events find a fully-developed peninsula, that of Yucatan, the only one in Central America stretching northwards. Nor are any similar northerly projections of the land to be met with in the whole North American continent, until we reach the higher latitudes. Yucatan, obliquely facing the peninsula of Florida, helps with it and Cuba to enclose the Gulf of Mexico, and cut it off from the Caribbean Sea, which forms an almost completely land-locked basin be-

tween South America on the south, the Great Antilles on the north, and the Lesser Antilles on the east. But while the shores around the Gulf of Mexico are varied by a number of not inconsiderable inner waters or lagoons—formations found also on the Pacific side—the bulging out of the land at Honduras develops in the Caribbean Sea two deep gulfs, the most northerly of which is called the Bay of Honduras. Of the few insignificant islands here and there met with on the Central American coasts mention will be made in their proper place.

2. *Configuration of the Interior—Mountains, Table-lands, and Plains.*

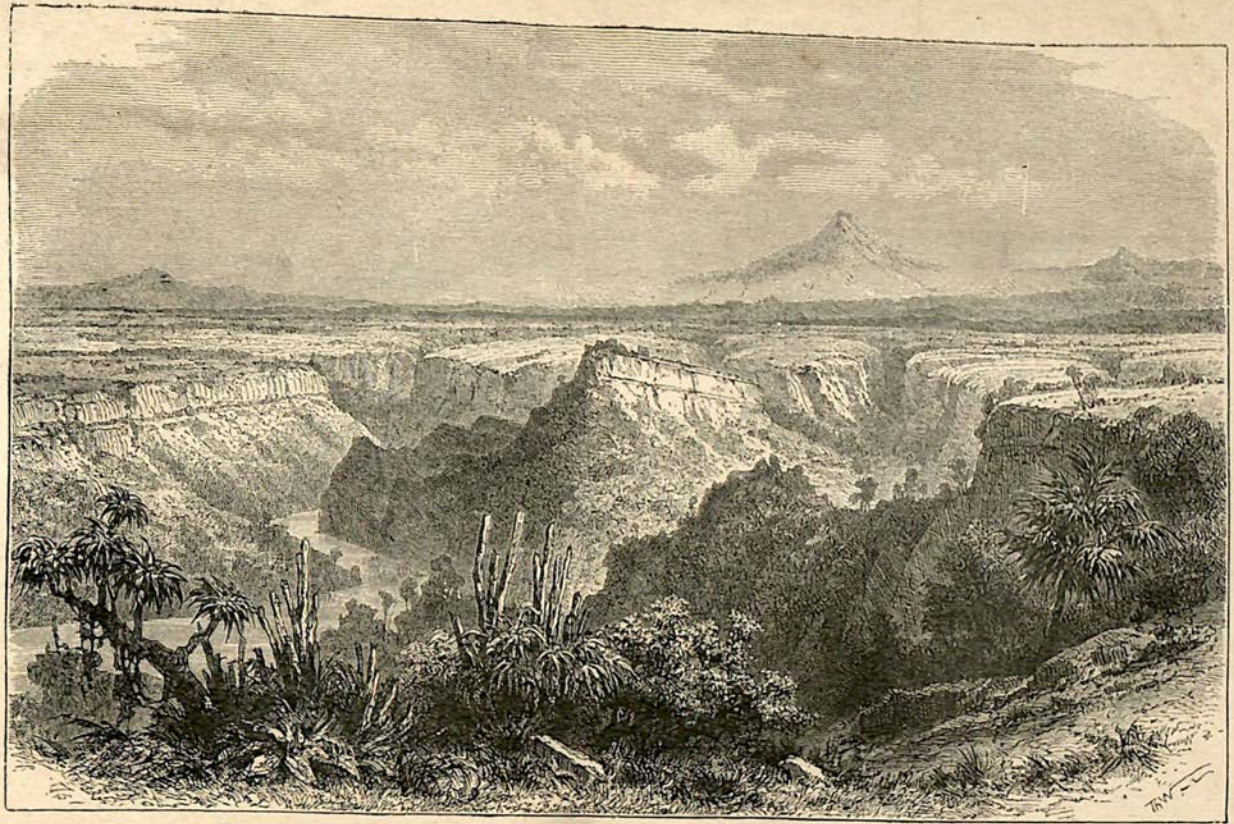
The high authority of Alexander von Humboldt contributed greatly to establish the erroneous idea that the mountain ranges of Central America were a continuation of the South American Cordilleras. Now, however, it is generally admitted that the two systems are essentially distinct, the Isthmus of Panama, which at present bridges over the former gap between both continents, being in fact of comparatively recent formation. The high land of Central America, instead of a continuous mountain range, forms a series of lofty table-lands, intersected by detached hilly districts and flanked by commanding volcanic peaks. These table-lands in some places rise in a succession of terraces one above the other, while they are elsewhere interrupted by deep intervening valleys. Thus the small plateau of Veragua, rising on the west of Panama to an elevation of 2000 to 3250 feet above the sea, is succeeded still farther west by that of Costa Rica, which slopes northwards down to the valley of Nicaragua. Here lies the great lake of the same name together with that of Managua, after which the land in Nicaragua again rises, forming a plateau spreading out in a north-easterly direction, and

sinking abruptly down to the Mosquito Coast along the Caribbean Sea. Northwards this plateau is continued by the table-land of Honduras, consisting of a succession of elevated uplands and mountain ridges, and separated by the valley of the River Lempa from the plateau of San Salvador, which is itself intersected by the Llanura de Comayagua. The Honduras table-land is again connected, by means of a low ridge scarcely 2000 feet high, with the plateau of Guatemala, which rises to a height of 6500, and is nowhere less than 4250 feet above the sea.

Up to this point we have no regular uninterrupted Cordillera, but in Guatemala a double range is developed, terminating in the district of Soconusco in Chiapas, and entering Mexican territory about the 15th degree of N. latitude. Here the range rises to a lofty plateau from 5600 to 6500 feet high, and on which are seen the so-called *Cerros*, or cones of trachyte and dolomite, encircling the cauldron-shaped valleys. Eastwards, this plateau sinks in the direction of the Gulf of Mexico to a series of upland terraces, and sends off a moderately high detached ridge right across the peninsula of Yucatan. Occupying nearly the whole province of Chiapas, the table-land has here its culminating point in the volcano of Soconusco, 7386 feet high, beyond it again descending to the isthmus of Tehuantepec, which is only 125 miles across, and where the two oceans are separated by a ridge not more than 750 feet high.

3. *The Plateaus of Oaxaca and Anahuac.*

But under the 17th parallel the rugged Oaxaca range towers aloft, as the advanced outpost of the lofty Mexican upland, and thence taking a north-westerly course, forms a double chain enclosing the intervening upland of Oaxaca, 4800 feet high, as well as the



BARRANCAS IN MEXICO.

To face page 5.

valleys and gorges of San Dominguillo and San Antonio de los Cues trending northwards. The whole range from west to east is 69 miles long, and from north to south not more than 7½ miles broad. North of the city of Oaxaca the Cuesta de San Juan, a cross ridge 6775 feet high, connects both parallel ranges, whose terrace-like slopes descend on the one hand to the states of Vera Cruz and Tabasco, and on the other to the shores of the Pacific Ocean. This cross ridge at the same time forms the intersecting line between the plateau of Oaxaca and the Mexican table-land proper. The culminating point of this range is the Cerro de Cempoaltepec, 11,158 feet high, and situated about midway between the two oceans.

On the borders of the state of Oaxaca, north of the Cuesta de San Juan, the table-land expands into the vast Mexican plateau, the highland of Anahuac, meaning in the old Mexican language "near the water," from *Alt* = water, and *nahuac* = near. Consisting principally of the Puebla, Mexico, Queretaro, and Michoacan uplands, it almost everywhere presents the appearance of a perfectly level surface, though often rent by fissures, of variable breadth and sometimes 1000 feet deep. These are the so-called *Barrancas*, watered by small streams flowing between their steep rocky walls.

Such is the general conformation of this vast table-land, above which rise the largest and highest mountains in the country. In the region of the highest peaks the plateau itself also attains its greatest elevation. It sinks gradually towards its eastern and northern limits, while towards the Pacific Ocean it descends more rapidly, here forming a succession of terraces. The broad ridge between the two oceans lies north of the isthmus of Tehuantepec in the middle of the mainland, trending thence northwards and drawing gradually nearer to the Atlantic coast. From the 19th parallel, it falls slowly towards the north, while

it remains almost a dead level to its extreme eastern edge, and descends westwards in a series of terraces. Thus we have at the western foot of the highest summits (8530 feet) the Tlaxala upland, measuring 93 miles in length by 71½ broad, and at a mean elevation of 7180 feet above the sea. It is bordered on the west by the extensive plain of Tenochtitlan or Mexico, at whose lowest level lies the city of Mexico, 7465 feet above the sea. This is again succeeded farther westwards by the uplands of Toluca (8856 feet), Michoacan (5840 to 6400 feet), and Playa de Xorullo, this last falling to 2460 feet above the ocean level.

4. *Mexican Volcanic System.*

At a distance of about 14 miles to the south of the capital, the plain is intersected by a series of volcanoes, running in a zigzag line from west to east for 454 miles in about the 19th parallel, and crossing the main axis of upheaval nearly at right angles. It thus, as it were, marks the direction of a line of volcanic activity, along which stretches from ocean to ocean the parallel of volcanoes and of the highest elevations, where also are situated the only mountains in the country covered with everlasting snows.

South-east of Vera Cruz, and near the coast of the Gulf of Mexico, lies the small burning mountain of Tuxtla, forming the summit of the Sierra San Martin. To the west of the same city rises the peak of Orizaba or Citlaltepetl, 17,367 feet high, beyond which, still to the west, is Popocatepetl, nearly 18,000 feet high, flanked on the north by Iztaccihuatl, that is, "the White Woman," 15,700 feet high. Twenty-eight miles from Orizaba rises Nauhcampatepetl, or Cofre de Perote, to a height of 13,356 feet; and on the western side of the same region the Nevado de

Toluca, 15,265 feet high, whose fires are now extinct. At 150 miles from Toluca is the Xorullo (4264 feet), while the series is closed by the Colima, frequently active, and rising to an altitude of about 11,000 feet.

5. *The Sierra Madre.*

North of the snow-capped Nauhcampatepetl begins a range which, at the famous mines of Zimapan and El Doctor, takes the name of Sierra Madre, thence stretching nearly in a parallel line with the coast of the Gulf of Mexico northwards to the Rio Panuco. It slopes somewhat gently eastwards towards the sea, but its western sides, while not so high, lead much more abruptly down to the Mexican plateau.

Numerous streams flow from its eastern side, amongst them the Rio Xalalpa, discharging into the sea at a point south of the Cerro Gordo on the coast. Farther northwards is the Cerro San Juan, and also on the coast the less elevated Punta de Bernal and Punta Delgada.

Being thus joined about the 20th parallel by the detached hills enclosing the table-land on the east, the Sierra Madre, gradually departing from the coast-line, takes at first a W.N.W. course, then trending to the north-west over the elevated plateau, and at Guanaxuato branching off into three main ranges. To the east and beyond the Rio Panuco, the Sierra Madre, descending abruptly to this river and the Rio San Juan, continues its course in several mostly parallel ridges, the most easterly of which is the Sierra de Tamaulipas.

Parallel with this range, and between it and the Gulf of Mexico, runs the Sierra Martinez, at a moderate elevation and length as far as the 25° N. latitude, beginning with the Cerro de la Palma, south of the Rio de Iglesias, and throwing off eastwards the little Sierra del Carrizo.

The most distant offshoots of this main range are the hills lying to the west, and running parallel with it, whose highest westerly point is the Pico Blanco. They traverse Nuevo Leon, and continue their course, interrupted by several streams, with two converging chains through Coahuila and in a line nearly parallel with the Rio Sabinas, until at last the south-westerly unites with the north-easterly range to the east of the Lago de Agua Verde, or "Lake Greenwater," as it is called.

The second, or middle main range, gathers up the entangled threads of the scattered trachyte crests or cerros of the Mexican table-land, uniting them in a few moderately elevated and also mostly parallel chains, which cross the states of Queretaro, Guanaxuato, and San Luis Potosi, culminating in the Cerros Buenavista and de los Angeles (10,364 feet), about the 24° N. lat., and at last sinking to a level with the plain towards the desert of Bolson de Mapimi.

Lastly, the third and most important chain of the Sierra Madre is the Cordillera of Anahuac, trending from the south-east to the north-west. Beginning north of the Rio Grande de Santiago, there rises in Guanaxuato a mighty range, whose western sides are much more abrupt than its easterly slopes, and which terminates to the north with the Cerro San Bernardo. It, however, finds a farther extension northwards in the Sierra Fria, which sinks to a level at the Rio Grande, flowing into the Lago Parras.

To the west rises the rugged Cuesta de Malacata, bathed by the Rio Grande de Santiago and the Rio Guichipila, and running from east to west in a parallel line with the more northerly Cuesta de Perieos. The Cordillera traverses the whole State of Durango, there taking a north-westerly direction, and assuming much broader proportions, until about the 112° 15′ W. longitude, it at last forms the western edge of the table-land, as the Sierra de

los Tepehuanes, separating the Chihuahua uplands from the less elevated plains of Sinaloa.

The range extends for a distance of more than 280 miles in length as far as the 31st parallel, and is crossed only by a few difficult mule-tracks. It rises to an elevation of 13,900 feet about the 31° 20′ N. latitude, where is the Guadelupe Pass. Its most important crests are: the Cerro del Mercado, in Durango (11,217 feet); the Tabacotes (7773 feet) and the Jesus Maria (8250 feet), both in Chihuahua; the Monte Bufa (7660 feet) and the Cerro Bachinaba, in the easterly spurs. The range is broken by the Rio de los Mulatos, and farther north by the banks of the Rio Bapispe, while beyond the river the Sierra Espuelas may be regarded as a continuation of the chain.

Along the whole course of this range, from the Rio Grande de Santiago northwards, there rise smaller coast ranges running parallel with the main system. In the extreme north-east the Sierra de los Patos stretches between Bufa and Bachinaba, here forming its easterly section, and descending gently towards the plateau of Chihuahua.

The main chain of the Sierra Madre, as above described, is partly covered with a fine growth of pines, cedars, oaks, ash, walnut, and such like trees; and it is perhaps on this account that its northern section is called the Sierra Verde. In the valleys and along the water-courses grow the never-failing sycamores, willows, and cotton-plants, while the plains are, on the contrary, for the most part treeless.

6. *Water System—General Character of the Central American Rivers.*

Most of the Central American rivers rising on the elevated uplands and plateaus, make their way either to the

Atlantic or the Pacific. In the north, however, and occasionally elsewhere, several not inconsiderable streams discharge into inland lagoons or lakes, which have no known outlets. A first glance at the map might lead us to suppose that Mexico at all events possesses an abundance of water—countless streams rising in the upland terraces. But the fact is, there is here, as elsewhere in Central America, a great dearth of water, for the river-beds are generally dry, or very nearly so, in summer, and are consequently, with few exceptions, ill adapted for navigation.

At the same time, the peculiar configuration of the upheaved land in Mexico fully accounts for the absence of large rivers, such as are elsewhere met with in countries of equal extent. This region is traversed by no stream in its entire length from north to south, or more correctly from north-west to south-east, and in this direction alone could a second Missouri find room to develop. A little reflection will suffice to show that streams rising on terrace lands invariably take the shortest way to the slopes, never continuing their course as if dammed in between the terraces themselves. But Mexico is characterised throughout its whole length by terraces rising rapidly one above the other, and bordering east and west on the plateau of Anahuac. And when we reflect that this table-land inclines gently eastwards in the north and westwards in the south, until it reaches the terraces descending on either side abruptly towards the coast, we shall have no further difficulty in understanding why all the rivers, with a few unimportant exceptions, flow directly either to the Pacific or to the Gulf of Mexico, that is trend either to the east or to the west, but never to the north or the south.

The extreme north-east alone is bordered by a mighty stream, the Rio Grande del Norte, which, however, in its

source, direction, and main features, belongs rather to the water systems of the northern continent than to those of Central America. It discharges into the Gulf of Mexico, which basin in fact receives all the larger Mexican streams, owing to the watershed in the southern part of the country approaching much nearer to the Pacific than the Atlantic seaboard. As, moreover, the Mexican mainland itself tapers from north to south, the rivers naturally diminish in length, until they assume the character of wild mountain torrents in the tropical regions of the south, where the land is narrowest. Deeply furrowing the hilly terraces, and mostly destitute of tributaries, they here, after a relatively short course, rush headlong into the sea.

The fact that a considerable number of the streams on the elevated uplands are collected into lakes, is also explained, partly by the contracted nature of the country preventing the formation of large rivers, and partly by the highlands expanding towards the extremely limited coast region, thus nearly altogether depriving the river systems themselves of the lower levels necessary for their full development. The same physical features, with the same results, prevail also in the Central American regions south of Mexico.

CHAPTER II.

THE INHABITANTS OF CENTRAL AMERICA.

1. *Common Points of Resemblance between the Central and South American Races.*

BEFORE describing in detail the several States comprised by us under the general name of Central America, many needless repetitions will be avoided if we first bring together such main characteristics as are common to them all. And foremost amongst these are the inhabitants themselves, who bear such a uniform stamp throughout the whole of Spanish America, that what we shall have to say regarding the peoples of Central America is, on the whole, equally applicable to those of the Spanish Republics in the Southern Continent. The subject may accordingly be all the more fully entered into in this place, while reserving for future notice such occasional departures from the common type as may here and there present themselves.

It should at the same time be remembered that the inhabitants of no other country in the world call for such careful study as do those of America in general, but more especially those of the favoured regions formerly belonging to Spain. The history of these lands is so intimately bound up with the various conditions of their inhabitants, that it becomes utterly impossible to understand the current of events in these republics without carefully considering the peculiarities of the Indian element, the

psychological results of the pernicious mixture of antagonistic races, and the relations of the various coloured people one to the other.

2. *Four Leading Types—The Aborigines.*

In all the Spanish American Republics there are clearly to be distinguished at least four different types: the Indians, the Mestizoes (half-castes), the Whites or Creoles, and the Negroes, the last in very limited numbers. Almost everywhere the Aborigines—that is to say, the so-called Indians—are by far the most numerous element of the population, the Whites or more civilised section constituting a very small portion of the community.

The Central American Indians are divided into numerous tribes with various names, and also distinguished one from the other by their physical appearance, language, habits and customs, though still presenting a certain unmistakable character in common. They are in general of a copper-brown colour, square built, robust, muscular; with straight, smooth, and glossy but coarse black hair; little beard; high, prominent, though not pointed, cheek-bones; large ears, thick lips, low brow, eyes somewhat oval, mostly black and very keen-sighted, with the outer corner turned a little upwards to the temples; lastly, a peculiar softness about the mouth, contrasting strongly with the earnest and even sinister glance of the eye. But though in general a vigorous, healthy, and well-developed type, they display, in common with all the American native races, that want of adaptability to outward circumstances which renders far more fatal to them than to Europeans all sudden transitions from hot to cold, or from cold to hot, climates. Of a decidedly earnest, quiet, even sad and pensive temperament, the Indian is ever prone to shroud

even his most ordinary dealings in a certain air of mystery. And while the inward passions are never reflected on his inexpressive countenance, he can yet at times be terrible in his wrath. Usually temperate, clever, docile, easily led by his superiors and especially by the clergy, he is at the same time indolent, unimaginative, ignorant, and superstitious.

INDIAN WOMAN.

3. *The Indios Mansos and Barbaros.*

The views generally entertained regarding the red men are for the most part utterly false. Indian and savage pass for convertible terms, whereas even under the most unfavourable circumstances the Central American Indians must be considered as, at all events, half civilised. Throughout the whole region they are divided into two great classes, carefully to be distinguished one from the other — the *Indios Mansos*, that is, the settled and agricultural tribes;

and the *Indios Barbaros*, that is, the unsettled and nomad tribes. Experience shows that the latter, the so-called wild or prairie Indians, everywhere withdraw to their woods before advancing European culture, all contact with which invariably involves them in total and often rapid destruction. For them civilisation is an insidious, but a no less sure and deadly, poison.

But the case is different with the Indios Mansos, who long before the discovery of America were devoted to agricultural pursuits, thereby acquiring an exceptional superiority, shown even now in their gradual progress and daily increasing numbers. To this class belongs by far the greatest number of the Central American Indians, such erratic and predatory hordes as the dreaded Apaches and Comanches, of Sonora and Chihuahua, being now met with only in the northern provinces, and more especially in the still unexplored wilderness of the Bolson di Mapimi, and along the banks of the Rio Grande del Norte. But even these are gradually withdrawing into the interior of Texas and New Mexico, where they must sooner or later succumb to the ever-advancing strides of European culture.

4. *Temperament of the Red Man.*

While the Red Man presents in his youth certain features of old age, he on the other hand retains a certain youthful appearance in his declining years, as shown by his scanty beard, unwrinkled brow, and black hair seldom tinged with the silver of age. In the countenance of the child there already lurks an expression of earnest thoughtfulness, his very joys being tempered with a dash of sadness, while his sorrows are deepened by a sinister and gloomy silence. With a stooping gait and downcast eye, he lacks that free and proud bearing characteristic of races who have still a future before them. Though with-

out the muscular power of the Negro, he is still robust, displaying, when needed, a great amount of endurance under labour, which, however, is rather of a passive than an active nature. He suffers uncomplainingly, and fears death all the less that life has for him but little charm. To everything that happens adversely he opposes a certain inertness. He is a deep dissembler; in the presence of the white man assuming a mild and yielding appearance, but swift to avenge his wrongs when opportunity offers. He displays an exaggerated ceremonious courteousness even in ordinary intercourse with his fellows, but, on the other hand, he seldom if ever succeeds in inspiring real attachment or devotion to his own person.

If his inventive faculty is slight, all the more remarkable is his talent for imitation, while his patience is inexhaustible. Hence the excellence of his workmanship in every handicraft that can be pursued in the sedentary life of his own hut, and that offers scope for the most painstaking care in all its minutest details. His intelligence is early developed up to a certain point, after which no farther progress is made. Still, some remarkable Indians are known to history, and, all things considered, his intellect cannot be regarded as of a decidedly low order, though betraying a peculiar bent of its own. The Indian is ever an observer, and penetrates with a certain readiness into the thoughts of others. And yet he exhibits a degree of self-complacency in his own degradation, and spurns all improvements brought or imposed upon him by the white man, to whom he will be indebted for naught, whom he rather cherishes the right to curse and to execrate for all the countless unspeakable horrors and indignities he has been fain to endure at their hands. His determination is to remain a thorough Indian, free to indulge his bitter hatred against the European usurpers of his domain.

The Catholic form of Christianity imposed upon him

is but a cloak beneath which is but thinly veiled his old heathenism. He is fascinated, not by the unfathomable mystery of the Triune, but rather by the numerous male and female saints of the calendar, reminding him, as they do, of his Pagan deities, vanquished but not dead. The human sacrifices on the altars of his forefathers are merely replaced by a Man-God crucified, blood still flowing for him on Golgotha, as it once did on the Teocallis of the priests of Huitzolopochtli in the olden times. The pomp of the Catholic religion he readily acquiesces in, while still supplementing it with the festivities of his former worship. Hence the feasts of the Church are now much the same to him as were the "Mitotes" to his Aztec ancestors. The race has forgotten nothing, because its conquerors have forgotten to educate it. Mere tools and human machines in the hands of Spaniards and Creoles, the Indians still exclaim: *No somos gente de razon;* "We are not rational beings." This explains why in their many intestine wars, the prisoners of one faction readily pass over to the ranks of the other, bearing arms with equal indifference for Liberal or Reactionist. For, in whatsoever form it may present itself to him, the Indian is still averse to civilisation, which has been hitherto identified in his mind with tyranny and oppression. The white man is ever his foe; hence he is never sympathetic, but rather shrinks from contact with the hated race by whom he has been despoiled of his land. To the Creole he offers neither food nor drink, holding all friendly intercourse and converse with him as so much weakness. And so he bides, ever suspicious, clinging tenaciously to the past. The cut of his garb and his food are still the same as in the days of Montezuma, and the simplicity of his household arrangements has undergone no change. The land also he tills after the old fashion, seldom sowing more than may be needed for the requirements of the next ensuing year.

And with his decided love of solitude he knows but few wants—on this account alone, if for no other reason, offering a passive obstacle to what we call progress.

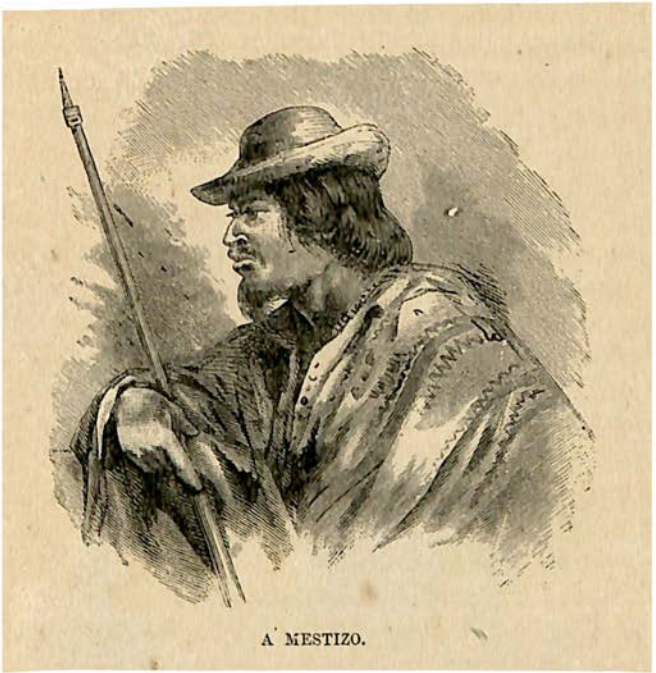
It is thus evident that the Indian is by nature differently constituted and of a different temperament from the white man; his mental evolutions are not the same, neither does he think, reason, feign, or feel as we do. In the depth of his soul, in his heart of hearts, there still lurks a something alien to our nature. He is swayed by many passions, moral forces, thoughts, feelings, and sentiments to which we are strangers. In a word, he is a being apart, not to be judged or measured by our European standard, and all careful observers agree that it is in truth no easy matter to fathom and thoroughly understand him.

5. *The Mixed Races—The Mestizoes.*

Next to the Indians the so-called Ladinos, or half-castes, are the most numerous class in Central America. They include such varieties as the Zambos, Mulattoes, Mestizoes, Quadroons, Octoroons, and various other subdivisions, with different names according to their various degrees of descent. It is impossible to form an accurate estimate of the actual number of each variety, though it is certain that the great majority of this mixed population are Mestizoes, that is, descendants of a white father and an Indian mother, and that all the other shades of colour are disappearing before them.

The Mestizoes are of a light yellow hue, but often fully as white as the south European, and may in general be regarded as a fine race of men. In their bodily and mental features they resemble the Creoles, but are more inured to privations; they are docile, but ill-educated, of unbridled passions, ambitious, sensuous, and void of all honourable feeling. In social intercourse the pure

Indians are preferable to the Mestizoes, in whom are concentrated the vices of both races—revenge and treachery, combined with laziness and cowardice, forming the main

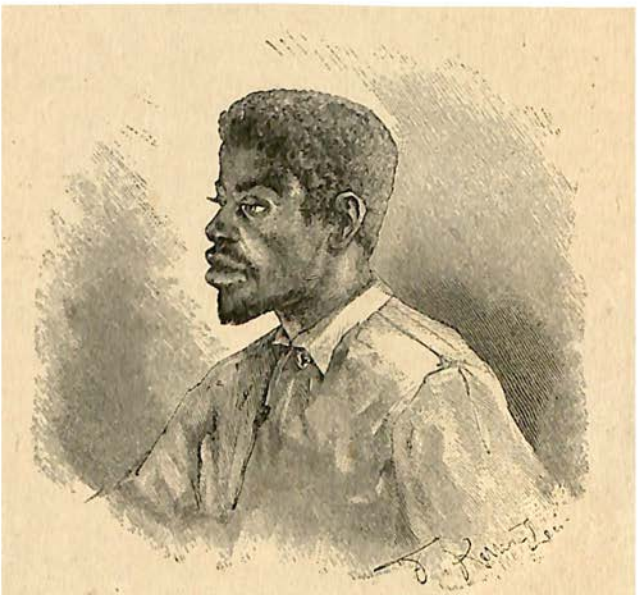


A MESTIZO.

features of their character. In the history of the Spanish American Republics, both Mestizo and Indian play an important part. To the Ladino class generally belong the male and female servants, the muleteers, the smaller tenantry and farmers, the scattered peasantry and herdsmen, as well as most of the itinerant mendicants and banditti; these last, under the name of guerillas, claiming a certain amount of political independence. At times, however, the Ladinos rise to the position of artizans and traders, and even of clergymen and the highest officials in the State.

6. *The Zambos and Creoles.*

The Zambos, Sambos, or Chinos, half-bred Negroes and Indians, are not very numerous, residing, like the pure Negroes and Mulattoes (the offspring of whites and



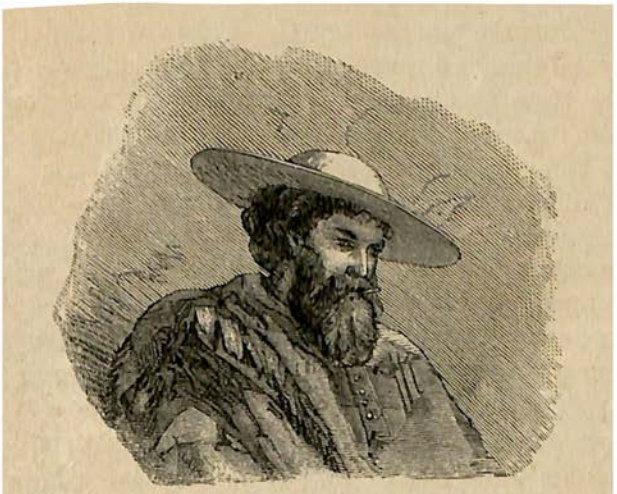
A NEGRO.

Africans) only in the coast districts. They perform most of the heaviest work in the towns, are often occupied with cattle-breeding in scattered villages and hamlets, or else are engaged on the plantations.

It is everywhere characteristic of the mixed races, that they endeavour as far as possible to pass for whites, and this is more especially true of the half-castes in America. But the generally ruling, though least numerous class of the population are the Creoles (Criollos), that is, the pure descendants of whites, and especially of the

Spanish conquerors. Since the separation of their provinces from the mother country they also usually call themselves Americans. In the towns they form the leading element of the population—the principal ground landlords, merchants, mine-owners, manufacturers, officials, higher clergy, physicians, lawyers, and artizans, belonging almost exclusively to this class.

Endowed with a bodily frame superior to that of many other types, the Creole is mostly of medium height,



A CREOLE.

well built, and of a pleasing expression of countenance. His flashing and piercing eyes are black, like his hair and full bushy beard, while his slender figure is marked by a somewhat contracted chest and curved back. Less favourable is the picture presented by the inner man. Without the moral character of the first Puritan settlers in North America, lacking both the steadfastness of the Anglo-Saxon and the trustworthiness of the German, the Creoles allow themselves to be swayed by passions and capricious im-

pulses, which can be held in check only by the strong arm of despotism.

They acquire knowledge readily, but superficially, shrinking from all earnest effort, and ever irresistibly attracted by the allurements of pleasure. The church gives them easy absolution for their sins, while inspiring them with a profound horror of heretics, and edifying them with the pompous pageantry of the Latin rite. Strangers they hate, in spite, or rather in consequence, of their indispensable presence in the country, for nothing is farther from the mind of the Creole than a doubt of his own excellence or a confession of the superiority of others.

In these Creoles is now centred the civilisation of Spanish America. But the Indian race being utterly alien to all European culture, the Creoles with what they have inherited of that culture hang as it were suspended in mid-air over an abyss of barbarism. The instinct of self-preservation they have well nigh entirely lost throughout the former Spanish domain. They wage relentless civil warfare amongst themselves, and butcher each other unsparingly, thereby at once diminishing their own numbers and placing arms in the hands of the coloured races. Whence comes this, it may be asked, since after all the Creoles are white men? Simply because man, who is no cosmopolite, may not be arbitrarily removed from his native clime and transplanted to other lands and other conditions of existence with impunity. Not only in America, but in every tropical region of the globe the same great lesson of experience is taught, that the European there settled degenerates in his posterity. In many places he fails to hand down his native qualities intact to the third generation, and, even when he remains so long untainted by alien blood, he is still so enervated as to remain European in little beyond the complexion. Practically it is a new race, but a race ever diminishing in numbers until it

sooner or later dies out altogether. In this same stage of degeneracy and of gradual disappearance, we now find the Spanish Creoles in Mexico and other parts of tropical America. At all events the general population in all these lands has for the last thirty years or so been rapidly augmenting, while the pure white element is actually declining, or becoming merged with the native Indian race. All observers are in accord that the pure Indians are steadily increasing, and that the Ladinos are constantly drawing nearer to the Indian type. "Here, therefore, the relations of the two races are the reverse of those prevailing in the United States, where, as we elsewhere record, the white man is visibly "crowding out" or absorbing the native Indian.

CHAPTER III.

GOVERNMENT AND POPULATION OF MEXICO.

1. *General Outlines and Extent.*

THE Mexican territory borders northwards on the United States; eastwards on the Gulf of Mexico, the Caribbean Sea, and British Honduras; southwards on the republic of Guatemala and the Pacific Ocean, which also waters its western seaboard. The frontier line between Honduras and Guatemala is not yet accurately defined, the land through which it passes being still but partly explored. The superficial area is estimated at about 743,948 square miles, its total length from north-west to south-east measuring 1950 miles, with a breadth along the northern frontier of 1250 miles as the crow flies, but reduced to 580 at the tropic of Cancer, and still further contracted to 125 across the isthmus of Tehuantepec.

In shape presenting the appearance of a cornucopia with its mouth turned northwards, Mexico forms a vast isthmus, constantly narrowing from north-west to south-east, and throwing off a considerable peninsula to the south-east. The Atlantic coast-line has a total length of 1582, and the Pacific 4150 miles.

2. *Political Constitution—Population.*

Mexico, or more properly the United States of Mexico (Estado Unidos de Mexico), forms a federal republic, framed on that of the great northern commonwealth, and con-

sisting at present of twenty-seven states, one territory (Lower California), and the federal district of Mexico, the seat of the central Government. The political organisation of the country is mainly and with but few modifications copied from that of the United States, as indeed is the case with nearly all the Central American republics. The financial condition of the State, like that of most other Spanish republics, and indeed the mother country, is deplorable. The Mexican national debt at the present time amounts to £63,000,000, interest on no part of which has been paid for many years; notwithstanding which the annual expenditure constantly exceeds the revenue.

This vast region, which is about three times the size of the Austro-Hungarian empire, is said to have a present population of 9,169,700 souls, though no great reliance can be placed on these figures, no regular census in the European sense having yet been taken; being, in fact, impracticable in many parts of the country. Hence much depends on purely arbitrary assumptions. A census instituted in 1873 gave a population of 9,400,000, which was evidently in excess of the reality, and as the returns for 1869 gave 8,812,850, nine millions in round numbers may be taken as not far from the truth.

According to a calculation of Cortina the population in favourable years increases on an average at the rate of 1·80 per cent. As regards the relative proportion of the sexes, the excess of females would seem to diminish as we go northwards, and to increase as we approach the equator. As a rule the southern are much more populous than the northern districts, and in the south also the population is densest in the interior on the plateau of Anahuac. This uneven distribution still corresponds with the conditions as they existed at the time of the Spanish conquest. The Indian element also continues to maintain

its immense superiority, numbering at least six millions of pure blood, about one-half of whom belong to the wild and marauding nomad tribes, roaming over the mountainous districts of the north. Hence, with the exception of a few inconsiderable towns, the most thickly peopled parts of the country still present a decidedly Indian aspect.

3. *The Mexican Indian Tribes.*

The Mexican Indians are split up into a large number of tribes speaking different idioms. There is no such thing as a common Mexican language, but rather a multiplicity of tongues, differing far more from each other than do, for instance, the various members of the Teutonic group. A distinguished savant, Don Manuel Orozco y Berra, has made a careful inquiry into the number of Indian tongues spoken in Mexico, resulting in showing the amazing number of 51 distinct languages and 69 dialects, to which he adds 62 idioms now extinct. Yet of this vast total of 182 idioms he has succeeded in grouping together not more than 35, with 69 dialects, which he classes in 11 families, still leaving 16 others wholly unclassified. And when we remember that each language corresponds to a separate tribe, we shall be able to form some idea of the immense variety of Indian tribes in Mexico. It will be enough here to mention the most important of them:—

The *Aztecs*, prevailing in the States of Mexico, Puebla, and Vera Cruz, with branches in Queretaro, Guanaxuato, San Luis Potosi, Durango, and Chihuahua, and a few scattered families met with throughout the whole of Central America, as well as in New Mexico and Texas, as far as the 37th parallel. They are the descendants of the famous race which at the time of the discovery of America had developed a most remarkable original and independent civilisation on the uplands of Anahuac.

The *Chichinecs*, individual families of which tribe are found in Queretaro and Guachichiles, as also in Xalisco, together with the branches *Carcanes* and *Tenoxquines;* a few occur in San Luis Potosi, Nuevo Leon, and Tamaulipas.

The *Otomis* spread over Mexico, Puebla, Michoacan, Guadalaxara, and Queretaro.

The *Tarrascos*, principally in Michoacan, where they were formerly the ruling race.

The *Tarahumaras* in the gorges of the Sierra Madre, in Durango, and in Chihuahua between the 24° and 30° north latitude.

The *Yaquis* or *Hiaquis*, a numerous and peaceful tribe in Sonora and Sinaloa along the banks of the Rio Hiaqui.

The *Apaches* roam over the almost unknown Bolson de Mapimi, between Durango, Chihuahua, and Coahuila, but reaching also far north into Texas and New Mexico. With the exception of a few tribes who group their wigwams into small villages for the purpose of cultivating maize, the Apaches are all nomads and marauders.

The *Totonaques* in the north-eastern district of Puebla, and in Vera Cruz.

The *Mixtecos* are numerous in Oaxaca, and are found also in Vera Cruz.

The *Zapotecos* form also a numerous tribe in Oaxaca. Before they were subdued by the Mexicans they were distinguished by a peculiar civilisation of their own, and to them Alexander von Humboldt attributes the building of the grand palace of Mitla in the neighbourhood of Oaxaca.

The *Teochiapanecos* settled in Chiapas, and partly also in the adjoining district of Tabasco.

The *Mayas* in the peninsula of Yucatan, had, like the Mexicans, arrived at a high state of civilisation before the arrival of the Spaniards.

The *Pericues* at the southern extremity of the peninsula of Lower California.

The *Monquis*, to whom belong the families of the Guaycuras and Coras, also in Lower California.

The *Cochimas* or *Colimiës*,
The *Laimones*,
The *Uchitas* or *Vehitis*,
The *Icas*,
} All in Lower California.

4. *General Aspect of the Mexican Towns.*

The distribution of population in Mexico is also partly determined by the peculiar formation of the land, which, as has been seen, is on the whole a hilly plateau, fringed by low-lying coast districts, broad in some places, in others contracted, but all leading by a series of terraces to the vast table-land occupying the greater part of the interior. The Mexican towns are generally situated on the upland plains, and with their broad straight streets flanked by flat-roofed one-storied houses, produce a very monotonous effect, relieved only by such invariable features as the cathedral, the Plaza or central Square, and the Alameda or public pleasure-grounds.

These gardens, with an exuberant growth of trees, shrubs, and flowers, such as is met with only in sub-tropical lands, embellished also with fountains and usually laid out with great taste, constitute a glorious feature of all the towns, most of which are also further adorned with the *Paseo*, or shady promenade. The cathedral generally assumes the form of a dome, richly ornamented with mosaics and many-coloured tiles. Such is the main exterior aspect of the Mexican towns. The interior of the houses, approached by a high gateway, consists of spacious and airy apartments leading on to a verandah.

PROMENADE IN MEXICO.

5. *The Capital and its Inhabitants—The Leperos.*

The most populous city in the country is the capital, Mexico, with 240,000 inhabitants, verily the most motley assemblage of mixed races in the whole republic. Indians and Mestizoes form the large majority, though here also is found by far the greatest number of Creoles in Mexico. Of foreigners the most numerous are the French, and next to them the Germans, Italians, Spaniards, Americans, English, Swiss, and Austrians. The French do not occupy a very high position in the social scale, being mostly industrious and prosperous tradespeople. In muslins and calicoes they have recently driven all rivals from the field. The Germans, without monopolising all the commerce of the place, are represented by the largest number of its leading commercial houses; while the watchmakers, tailors, and hatters are also mostly Germans or Swiss. It is painful to be obliged to add that not a few of the Austrians, Belgians, and Swiss are found amongst the *Pordioseros* and *Leperos*. Both the name and the occupation of these lazy rascals remind one forcibly of the famed lazzaroni of Naples. They form the poorer population of the towns, numbering in the capital alone as many as 30,000. The lepero is employed in all such work as requires neither effort nor skill. He steals and gambles, and is equally adroit in the use of the mandolin and the knife. He is endowed with a rare elasticity of conscience, being well aware that justice is here easily eluded, and the church readily reconciled. In the matter of dress and residence, he is as accommodating as the Indian himself. When he awakes in the morning he knows not whether it may be his lot before the day is over to riot in abundance or to pine in want; but he can adapt himself with equal readiness to either alternative, profiting by, or bending to, the caprices of fortune, according as they are favourable or adverse.

The artizans also occupy a very low position in the social scale, being esteemed no better than day labourers. Their skill is of a low order, they are badly paid and badly fed, and their tastes in the matter of pleasures and indulgence is much the same as that of the Indian and the lepero.

6. *Physique—Dress—Social Habits.*

As regards the external appearance of the Mexicans, and especially the much-vaunted beauty of the women, it will suffice to say that in many towns not a single face is to be seen that, according to our notions, could be called beautiful or even pretty. Nine-tenths of the population are Indians and half-castes of the most varied types and hues, from the pale yellow to the dark copper-brown complexion. The men are as a rule well built, tall, and muscular; the women, on the contrary, small and weakly. They have nearly always large black eyes, remarkably white and regular teeth, and an abundance of raven black hair. But that is all, and such attractions are more than balanced by ill-shaped noses, large mouths, and prominent cheek bones. However, this picture does not of course apply to the women of pure Spanish descent.

In the warmer districts the climate requires but a very scanty amount of dress. Here the women usually wear a light, bright-coloured skirt, a simple *camisa* of white cotton, throwing the well-known *rebozo* over head and shoulders only when going some distance from home.

The men of the upper classes now but seldom wear the *charro*, the old national costume, except as a riding dress, and the toilets of the provincial ladies leave much to be desired in respect of taste.

The wealthier sections of the community are fond of making a parade of luxury, generally sinking to mere

childish ostentation. This is especially true of the riding dress of the gentlemen, who mostly appear on horseback at the Paseo in the national costume, while elsewhere, whether at home or on foot, they are dressed in the usual European fashion.

The whole life of the Mexican bears the stamp of a "dolce far niente." They are never to be seen bustling through the streets, or engaged in serious pursuits of any sort. They are early risers, the ladies going deeply veiled to church, while the men take their morning ride. After a turn on the Alameda and a bath, for which every provision is made both in public and private, the Mexican ladies may often be seen walking to and fro on the terraces of their houses in order to dry their luxuriant tresses, which fall like a mantle over the shoulders down almost to their feet.

7. *Mexican Children—Food—The Tortillas.*

But everything is done in a quiet, listless sort of way. Even the children are models of propriety—no shouting, romping, or boisterous merrymaking, as amongst more vigorous races. The little creatures seem very precocious, are early developed, and as a rule extremely delicate. The mortality prevailing even amongst those of the upper classes, surrounded as they are with every attention, is positively frightful, and due entirely to the manner in which they are brought up. They are entrusted to the exclusive care of young Indian nurses, and even in the best families it is not customary to give them in charge to experienced women. They make rapid progress till about twelve years old, after which a state of stagnation seems to set in, and the women especially continue to lead the lives of hothouse plants.

As national dishes the tortillas and frijoles are largely

PREPARATION OF TORTILLAS.

To face page 32.

consumed both by rich and poor. The first are a preparation of ground maize cooked in the form of a thin cake, soft and tasteless. With the lower classes this takes the place of bread. They roll it up like a spoon with which to fish out the frijoles, and then eat all up together. The frijoles are a sort of small black bean, which flourishes especially in the neighbourhood of Vera Cruz; when thoroughly cooked they assume a chocolate colour, and form a wholesome and savoury article of diet.

A favourite dish also is a ragout of turkey, seasoned with chillies, Adam's apples, and tomatoes. When mixed with maize flour, rolled in maize leaves, and steamed, it forms the so-called *tomales*, one of the best dishes in the country. But, as a rule, the Mexican cuisine finds little favour with the European palate. Lard is largely consumed with all dishes, even with sweetmeats, and such a thing as a good soup is scarcely to be had. Even the coffee, of which excellent qualities are produced, is so badly prepared as to be quite insipid; but the chocolate, strongly flavoured with cinnamon, is very good, and forms a very general beverage.

8. *Education—Religion—Superstitions.*

The education of the women is greatly neglected, so that they display the most astounding ignorance of the most ordinary subjects. Of geography and history they do not possess the most elementary knowledge, and for them Europe is limited to Spain, whence they are sprung; Rome, where the Holy Father resides; and Paris, whence come the fashions.

Nor is the condition of the men, at least amongst the lower orders, much better, and it is very doubtful whether three-fourths of the people can either read or write. They are strict Roman Catholics, of that peculiar form so char-

acteristic of the Latin races in America generally. The educated classes conform to the outward ceremonies and ordinances of the Church, while inwardly believing little or nothing of its dogmas. The lower grades of society are, on the other hand, steeped in the most grovelling superstition, intensified by many traditional Indian reminiscences. This section of the community yields a blind obedience to the clergy, notwithstanding the severe laws with which the Government has endeavoured to counteract the influence of the priests. Even so recently as 1874 a genuine case of witch-burning occurred in Mexico. The reports which are occasionally heard of the progress of Protestantism in the country must be understood to refer exclusively to the Protestant communities settled there, consisting altogether of strangers recently released from the disabilities hitherto imposed upon them by the law. No well-informed person is at all likely to indulge in the delusion that the Reformed Church is making any real progress in Mexico, beyond perhaps now and then securing the adhesion of an occasional proselyte.

9. *State of the Country—Brigandage.*

Strikingly characteristic is the universal indolence and lethargy of the people, due in part to the prevalent feeling of insecurity resulting from the constant pronunciamentos. The want of roads and practicable highways contributes also to this state of affairs, by encouraging guerilla warfare and impeding the transit of the produce of the land. Hence commerce is centred entirely in the hands of foreigners, the natives preferring to play the part of guerilleros in the hope of thereby acquiring rank and distinction. The people have already become so habituated to pillage and bloodshed, that a Mexican, on hearing of any highway robbery accompanied with loss of

life of the victim, will exclaim at the utmost: "Pobrecito! que disgracia!"—Poor fellow! what a misfortune! And there the matter ends. Robbers and assassins all the more easily escape justice that they are often on excellent terms with the authorities themselves, to whom they are at times even in a position to render good service. There is a large class in Mexico determined to live one way or the other on wayfarers, that is, either as their plunderers or protectors, according as they may or may not be handsomely fee'd for their attentions. Still it must be confessed that the attacks of marauders are generally unattended with bloodshed, for the Mexican scarcely ever dreams of offering any resistance to his assailants. Those journeying on horseback take very few valuables with them, gladly allowing themselves to be relieved of the coins they are careful to provide for the contingency, in order to escape the fate that inevitably awaits those who are foolish enough to travel without money in their purse. The brigands themselves, however, are all cowards, holding firmly by the old Spanish proverb: "La pintura y la pelea desde lejos las ojea,"—Pictures and battles should be seen from afar. It is however meantime satisfactory to learn that such highway scenes of disorder have somewhat abated of late.

10. *Politics—Public Lotteries.*

Still, the constantly recurring pronunciamentos against the government for the time being must produce the most disastrous effects even on the family life, and the evil is intensified by the political caucuses, the endless jealousies, and petty wrangling arising out of revolutionary attempts, inspired by unworthy motives and conducted in a mean and dastardly spirit.

A peculiarly baneful influence must also be ascribed

to the so-called *monte*, or public lotteries, at once the national pastime and the national curse of the Mexicans.

These lotteries are universally popular with all classes, often exciting them to the wildest pitch of frenzy. It not unfrequently happens that the earnings of a whole year, or even an entire fortune, will be staked on a single draw. What has been laboriously acquired is recklessly squandered, while losses difficult to be replaced will at times lead to the most atrocious misdeeds. Some places in the neighbourhood of the capital flourish entirely on the monte, which is indispensable to the proper observance of all public festivities. It happens often enough that the lucky winner finds himself obliged to defend his suddenly-acquired wealth from lurking marauders, and even to pay for his success with the loss of his life.

CHAPTER IV.

THE PENINSULA OF LOWER CALIFORNIA.

1. *General Outlines—Climate.*

THE great Californian peninsula, or Lower California as it is called, forming a complete whole in itself, may here be conveniently described before passing in review the rest of the Mexican mainland. In area it is a little larger than England and Wales, measuring 61,562 square miles.

The frontier line with the United States begins on the Pacific seaboard, in a dreary and solitary desert at a place called Initial Point, a little south of the 33d parallel, running eastwards towards the Gulf of California as far as Fort Yuma, at the junction of the Rio Gila with the Rio Colorado. The peninsula terminates southwards at Cape Palmas (23° 25′ N. lat. and 109° 25′ W. long), and Cape S. Lucas (22° 52′ N. lat.), whose sandy shoals, strewn with fragments of rock, serve as an excellent natural bed for shellfish of a choice quality. Here the waves roll gently over the shelving beach, affording moisture to the sea-cresses growing in the clefts of the rocks, and enlivening the stillness of the broad coast districts.

Although under the same parallel as Sinaloa, and Sonora, and severed from them only by the relatively narrow Gulf of California, the climate of this region differs altogether from that of those two States. Watered by two seas, one of which reaching to the Pole brings with it

warm and cold breezes alternately, according as they blow from the north or from the equator, while the other, being almost completely land-locked, is retained at a high temperature, Lower California apparently combines all the conditions of a damp climate. Hence we may well wonder at its remarkable dryness and sterility. This is the sole and inevitable cause of the poverty of the land, whose thinly scattered inhabitants look on the possession of a spring as their greatest treasure, and to whose ears the pattering of the falling rain is as the sweetest music. In the summer months they gaze wistfully at the gathering clouds which form on the bosom of the ocean, but are wafted away beyond the peninsula, without losing a drop of moisture, till they strike the Cordilleras, where they discharge their contents in copious streams. The bareness and consequent heat of the land would therefore seem to be mainly due to the absence of rain, which all living things here pine for.

The climate is otherwise on the whole tolerably regular, temperate, and healthy, the heat attaining in summer a maximum of 90° Fahrenheit in the southern districts of San Antonio and San José del Cabo, and in winter never falling below 60°. The privilege of a perpetual spring is enjoyed chiefly by the hilly regions, where the narrow valleys are clothed with a perennial green of the brightest emerald.

2. *Geological Formation.*

With the exception of the granitic northern and southern extremities the land slopes gradually upwards from the Pacific coast, in a series of terraces, to its highest altitude near the eastern coast, where it forms steep precipices, from 2000 to 3000 feet in height, facing the Gulf of California. This singular conformation suggests the idea that

the peninsula forms only the half of a mountain range, divided longitudinally, of which the corresponding or eastern half has disappeared along the depression where now roll the waters of the gulf. The narrow tract between the foot of the high escarpment and the shores of the gulf is broken into ridges and valleys, forming a kind of "undercliff" and clothed with a luxuriant semi-tropical vegetation.

Topographically, Lower California is divided into three clearly distinct sections, of which the northern and southern have much in common, both of them differing considerably from the central portion of the peninsula. The geological conformation of this section is however continued northwards, and, as is generally the case, the surface-configuration of the land is intimately associated with its geological structure.

The southern extremity, as far as the Bay of La Paz, in 24° 30′ N. lat., consists nearly altogether of one compact mass of granite. Thence northwards to the district of San Borja, an abandoned missionary station under the 29th parallel, we find vast layers of Tertiary sandstone, here and there covered with thin deposits of a post-Pliocene epoch, and both occasionally concealed by rocks of volcanic origin. The granite crops out in two or three places only, and the uniformity of the lofty ridges is now and then broken by a few volcanic peaks. North of San Borja the granite again appears, accompanied by large quantities of igneous rocks, the older Tertiary sandstones giving place to post-Pliocene beds often spread over extensive tracts of land. This geological character remains unchanged as far as Los Angeles in Upper California.

3. *Mountain System.*

Near the edges of the eastern escarpment rises the *Pic de Giganta*, whose summit consists of volcanic rocks, although there is no crater or any other trace of former eruptions. The slopes are calciferous, intersected by rich copper lodes, which are being worked in some places, especially in the Loreto district. The highest known peak of the peninsula is Mount Calamahue, on the 31st parallel of latitude, which rises to an altitude of 9130 feet. Between the bays of Mulegé and Los Angeles lies another considerable cluster of hills known as *Las Tres Virgines.* Here also the rocks are volcanic, the summits presenting the appearance of former craters that have fallen in, and some of them containing sulphates. The slopes consist of sand, lava, and basalt. At the southern extremity rises the Sierra de St. Lazaro, which culminates on its western side in a peak 6300 feet high.

4. *Rivers—Harbours—Vegetation.*

Lower California has very few rivers, and none that would be considered as worthy of the name on the mainland. Although there are several upwards of twenty feet broad, none of them are available for navigation; their general character is to flow deep below the surface of the land, in their course towards the Pacific. A not uncommon phenomenon is the total disappearance of a stream in its bed, which is to be attributed to the porous nature of the sand over which it flows.

One or two of the numerous ports along the coast are destined one day to play an important part in the commerce of the Pacific Ocean. Magdalena Bay, the best of them, is scarcely inferior to San Francisco itself in extent

and depth of water. This bay, like that of San Ignacio and the Scammon lagoon, is an excellent fishing-ground for whales, and, like them, has during the last few years attracted the attention of numerous whalers.

Useful timber of any kind is somewhat rare, though oaks and pines grow on the granite hills of the south. Acacias are found in all the valleys, and nearly everywhere the palms yield an abundance of poles and thatch available for building purposes. In the charming and romantic valleys the banks of the streams are overgrown with wild roses, and tillage here yields favourable results. The orange, mammee, and sapotilla (*Achras zapota*) trees, and nearer to the coast the coco and other palms flourish vigorously. The rocky and arid lands are also covered with the American aloe and cactuses of various sorts, amongst which are some producing excellent fruit.

5. *Inhabitants—Population—Indians.*

The inhabitants of Lower California are an honest, sluggish race, vegetating in their seclusion, and ignorant of everything taking place in the outer world. The peninsula is one of the most thinly-peopled regions of the temperate zone, its entire population, about one-half of which is concentrated in the picturesque valleys of the granitic range to the south, not exceeding 20,000, and consisting of Spanish and Indian half-castes, the latter element greatly in the ascendant. The men are tall, slim, and active, while the women are distinguished for their beauty and simple morals. There are some 600 foreigners—Germans, French, and especially North Americans, nearly all engaged in the mining operations that have been for some years back profitably conducted by several American companies, which have obtained large concessions of land from the Mexican Government.

In the whole peninsula there are no fixed settlements of Indians. In the months of April and August a few hundreds of the Yaquis and Maga tribes cross over from the opposite side of the gulf, encamp in little villages along the shores of the Bay of Pechilinque, and devote themselves to the pearl fisheries. Such temporary settlements have been formed along the whole coast, from this bay to the island of San Marcos, famous for its beautiful alabaster.

Before the arrival of the Spaniards, Indian tribes lived in the peninsula; the Maricopas in the northern parts, and farther south the Chichimecas, from the Bay of Mulegé and La Paz as far as Capes S. Lucas and Palmas. But after the appearance of the white man, they withdrew across the gulf to the highlands of Sonora and Chihuahua, where their descendants still retain many of their primitive customs.

6. *Towns—San Diego—Loreto—Island of Carmen.*

On the Pacific seaboard there are no townships of any consequence, and nothing but a few farmsteads on the bays of Magdalena, San Quintin, and All Saints. The desert hilly regions are frequented by the wild sheep and the prong-horned antelope, the Californian deer, and other ruminants, that browse on the bitter cytisus, and have their home amidst the brambles and precipices of the mountain side.

Near the northern frontier lies the port of San Diego on the west, with 500 inhabitants, the mission of St. Thomas with 250, and the vineyards of Comandu with about 300 Nearer to the gulf, between the bays of Los Angeles and Mulegé, on the slopes of Mount Giganta, is the mining town of Loreto with a population of 400. Opposite this place is the considerable island of Carmen,

not far from the mainland. The flat, sandy shores of this island are flooded at every tide as far as the black basalt crest in the centre, the evaporation of the water leaving a dazzling white deposit of salt resembling a snow-field. The Californian Government derives a large income from these natural salt-beds, which it leases out every year.

7. *Archipelago of Loreto—Sea-fowl.*

Towards the Bay of Cortes on the one hand and the Bay of San Luis and the Isla Rasa on the other, stretches the archipelago of Loreto, or the rocky islands of St. George, against whose granite and porphyry cliffs the surf is dashed to foam, but which are destitute of fresh water, no rain falling here for years at a time. These islands are the home of countless flocks of sea-birds, that have here deposited vast beds of guano, but, in spite of their mild climate and clear skies, they are otherwise barren and unproductive.

In the Bay of Mulegé is the little town of the same name with some 1000 inhabitants, and facing the island of Santa Ines, whose undulating sandhills offer a convenient breeding-ground for vast numbers of sea-fowl. A rare sight is presented towards the dusk of evening by the innumerable clouds of these birds fluttering to and fro, and gradually settling down between the hills for the night. At break of day they rise again, filling the air with their varied notes, and sailing away beyond the horizon in quest of food. The noisiest of these tribes are the mews, both white and grey (*Larus ridibundus*). But here also are the ungainly pelican, lively little sandpipers and strand-runners of many sorts, the heron, ibis, and tantalus, gravely following the ebbing tide in order to prey upon the molluscs exposed by its retiring waters.

8. *The Capital, La Paz—Mineral Wealth.*

La Paz, capital of the peninsula, lies at the head of a fine deep bay, where hundreds of ships might ride securely at anchor, and is the only port at present open to foreign trade. It is a place of call for the steamers plying between San Francisco, Mazatlan, and Guaymas, and for many sailing vessels freighted with goods for the various ports of the Pacific. La Paz has a population of 2000, with the exception of a few foreigners all of Spanish race. The streets are straight and broad, and shaded by a double row of leafy ash trees, and the houses, mostly one-storied, whitewashed and with green Venetian blinds, are built of solid stone with tiled roofs. The beauty, gentle grace, and musical talent of the women are deservedly praised; and in the mild summer night there flow from many houses the sweet strains of instruments touched with no unskilled hand.

Some eighty miles south of La Paz lies the little township of San Antonio thirty-two miles inland, on the eastern slope of the hills, and with a population of about 400, all engaged in the rich silver-mines in the neighbourhood. Through the discovery of these underground treasures Lower California has of late years risen greatly in importance. In several spurs, branching off from the main range towards the gulf, vast silver-lodes have been disclosed, some of them at but a short distance from the sea, which here affords such good anchorage that the ships are enabled to lie close to the shore.

Besides silver, copper, and lead, rich gold-fields have recently been discovered in some of the upland valleys.

9. *San José del Cabo—Agriculture—Birds and Fishes.*

Following the line of coast southwards, we come to the charming vale of San José del Cabo, in the centre of

which is the little town of San José, with 1800 inhabitants, and encircled by orange groves, above which the lofty coco-nut palms wave their graceful fan-shaped crowns. This thoroughly tropical vegetation stretches up the valley to the foot of the hills, where the village of San Juan del Cabo completes the panorama of a lovely region, everywhere enlivened with the song of the mocking bird (*Turdus polyglotta*), and the chattering of Californian magpies, with their bright, many-coloured plumage.

Along the strip of coast between San Antonio and San José del Cabo the chief occupations are agriculture and cattle-breeding. Wherever the springs and little burns afford water for irrigation, the sugar-cane, rice, and frijoles, or black beans already spoken of, are cultivated; while amidst the clumps of trees the white houses, surrounded by tastefully laid out flower-gardens, give tokens of a comfortable and prosperous population. From San José del Cabo to Cape St. Lucas the coast is barren and rocky, animated principally by large numbers of wading-birds, who here find abundance of food. This is the home of the boat-bill, the purple ibis, the tantalus, and many other varieties of the family of the *Grallæ*. In the mountains the black eagle has his eyrie, and on the shore the fishing eagle. The sea everywhere teems with fish. At the southern extremity of the peninsula the sandy shore between Capes Palma and St. Lucas is frequented by the gigantic turtle and other smaller species yielding the tortoise-shell of trade. This coast is also infested by large cuttle-fish, sharks of unusual size, and the sword-fish. On the utterly desolate western coast bask numerous schools of sea-lions and other species of seal; while, on account of his valuable fur, the sea-otter is here hunted by speculating North American sportsmen. There is lastly an extraordinary abundance of rare and excellent shellfish, including the pearl oyster, and many other species for the most part still unclassified.

CHAPTER V.

THE MEXICAN MAINLAND.

1. *Character of the Coast—Mazatlan—Mazanillo—Road to Colima.*

VERY diversified is the picture disclosed to the traveller landing on any of the many points along the Atlantic coast of Mexico. Here stretches a long beach of glowing sand, there a bay enclosed by coral reefs, or, again, the mouth of some sluggish stream choked with shoals and sandbanks. Nor is it very different on the Pacific seaboard, should it be the traveller's intention here to disembark, and ascend the series of terraces leading to the elevated table-land on which is situated the capital of the country. The two most important ports on the west coast are the sultry Acapulco, and Mazatlan farther north.

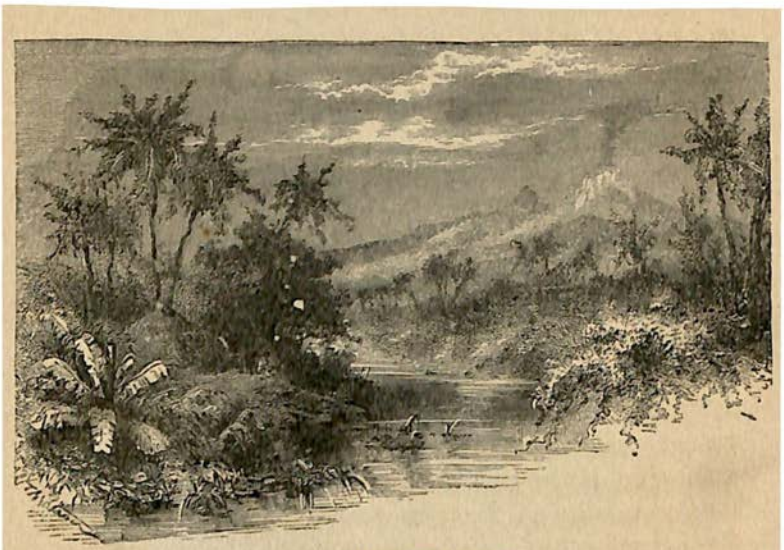
Mazatlan lies exactly on the tropic of Cancer, and, coming from the north, we are here reminded, especially by the increasing temperature, that we are entering the torrid zone. Seen from the sea, Mazatlan, shaded by lofty palms and gigantic bananas, presents a very picturesque appearance, but the agreeable impression is utterly dispelled by a nearer view of the place. The population numbers about 20,000, of whom the majority are Mestizoes. In the better quarters reside the descendants of pure Spanish blood, but the suburbs are chiefly occupied by Indians.

Travelling in company with one of the most reliable of recent travellers, Mr. J. L. Geiger, we find ourselves about 300 miles south of Mazatlan, at the port of Mazanillo,

situated on the shores of a fine circular bay, surrounded on all sides, excepting the narrow entrance from the sea, by a range of hills clothed from head to foot with the richest and most varied vegetation. On the other side of these hills, and not 200 yards from the ocean, lies the extensive brackish-water lake, called the Laguna de Cuyutlan. The bay forms a superior natural harbour. It is about six miles in diameter, and its depth allows vessels of whatever tonnage to anchor within a short distance of the shore, while its entrance, about two miles in width, is free from bars and shallows. The climate is sultry and unhealthy, especially at the end of the dry season (March and April), when Lake Cuyutlan is almost devoid of moisture and its bed cloaked with putrefying matter. Fever of an intermittent type, termed *calentura*, is then very prevalent, and spares few of the inhabitants. Although rarely fatal, it is debilitating to the constitution. Against the evil effects of the unwholesome drinking-water of the place the inhabitants use cooling beverages, termed collectively *aqua fresca*, composed, besides water and sugar, of the juice and seeds of different fruits. The houses are built on the same general plan as in all Mexican towns, and are either of *adobe* (sun-dried bricks) or wood, one-storied, and protected by tiled sloping roofs. They form a quadrangle, enclosing a courtyard, towards which all the chambers are open, a convenient arrangement in a country where shade in the fresh air is an indispensable necessity.

The journey inland to Colima commences with a voyage in a steamer of 35 miles along the Laguna de Cuyutlan, practicable only during about four months in the year, the water not having sufficient depth to float a vessel for the remaining months. The entire length of the lake is about 40 miles, and its width varies between 4 and 10 miles. It is almost completely enclosed

by mangrove jungle, which creates numerous inlets by its growth where the water is the shallowest, and overspreads the banks for miles, an unbroken wall of sombre foliage. The stagnant waters are covered with a brownish-green slime, and the little steamer cleaves through the thick viscous surface, disclosing the dark, turbid liquid below.



VOLCAN DE COLIMA.

At intervals, a black uneven line, glimmering above the ooze, betrays the presence of the ugly alligator; and in some places the water is crowded with flocks of, ducks and teal; whilst on the floating islands storks and herons sedately stand or stalk about in search of their food. Pelicans, flamingoes, kingfishers, and sandpipers, add to the animation of the scene, and a variety of hawks soar in graceful circles overhead. As the south-east end of the lagoon is approached, the mangrove jungle ceases, and the entire expanse of the lake is seen, disclosing the hills that border the waters to the northward, with their robe

of clustering oil-palms; while to the rear, range after range of mountains are seen, crowned by the snow-capped peak of the majestic Volcan de Colima in the far distance.

From Cuyutlancillo, at the end of the lake, the journey is continued on mule-back to the Rio de la Armeria, a distance of eight miles. The road forms a wide path of soft sandy soil through forests of impenetrable undergrowth. The trees are not large, but are so woven together as to form impassable barriers. Hundreds of creepers cling to every trunk and twine round every branch, connecting by a thousand wiry threads thickets, shrubs, and cacti, a massive bulwark of profuse vegetation, through which the axe alone can hew a way. The huge "organ cactus," with its tree-like stem, often two feet in diameter, and 10 to 15 feet high, sends up its stiff, straight branches to a height of 30 or 40 feet from the ground, whilst smaller species of the same tribe mingle in thousands with the shrubs and bushes nearer the earth. The flowers have little scent, but their profusion, and the various tints of white, yellow, and red, blended with the countless shades of green, charm the eye. These forests teem with birds of brilliant plumage—amongst them parrots red and green, tiny humming-birds with metallic hues, and numerous other birds graceful in form and attractive in plumage. Farther on, in the more open country, wild turkeys, American partridges, and buzzards are seen. From the Rio de la Armeria the journey to Colima is performed in a rickety waggon drawn by mules, which bumps and jolts over the uneven road, giving a foretaste of the miseries of diligence-travelling which await the traveller throughout the greater part of the Mexican interior. The road gently and gradually ascends, in some parts winding up hills overgrown with rich verdure, often descending some steep declivity to cross a small river or gulch, and re-

ascend a new incline loftier than the preceding; thus it continues for hours, until the spacious *Via de Colima* is reached, a highroad which leads for five miles through the splendid valley of Colima up to the town itself.

2. *Colima and Neighbourhood.*

Colima, on the site of an old Indian town, in about the 19th parallel of north latitude, and 104° east longitude, is encircled by hills, above which towers the lofty volcano of Colima, which, after a silence of forty-one years, again burst out into violent activity on June 13, 1869. The 25,000 inhabitants of Colima are mostly Indians and Mestizoes with a very slight dash of Spanish blood. Situated some 1470 feet above the sea-level, the climate is healthier and the temperature somewhat lower than on the sea-coast. The heat is, however, still considerable enough to render a walk at noon through the long, regular streets of the town a somewhat laborious undertaking. The houses, mostly one-storied and with flat roofs, have no windows towards the street, a style of street architecture prevalent throughout nearly the whole of western Mexico. An oppressive stillness pervades every quarter of the town except the Plaza de Armas, or simply the Plaza, where, as in all other Mexican cities, all the stir and life of the place is concentrated. On the north side of this Plaza are situated all the finest public buildings. The Alameda on the Plaza Nueva is a small, but shady, public garden planted with palms, oleanders, orange and citron trees. The town is intersected by the Rio Colima, a little river, on whose banks are seen many strange and unexpected sights. In the neighbourhood are magnificent fruit gardens, the exuberant splendour of their vegetation passing all description.

The journey hence to the city of Guadalaxara, accord-

ing to Geiger, can only be undertaken with the protection of an armed escort, as the road as far as Zapotlan is especially unsafe. The highway, originally well constructed, is now in a wretched condition, for, like every other public work in Mexico, it has not been repaired for many years. The country gradually rises, and the cocopalms of the maritime plains disappear, to be seen no more until the shores of the Gulf of Mexico are reached. But the hardier banana still flourishes at this increased elevation, in the neighbourhood of villages. Through the low, loose stone walls of enclosed fields glimpses are obtained of rich rice crops and acres of maize, sugarcane, cotton, and tobacco; but only a small proportion of the enclosed land is now cultivated. Twelve miles from Colima the first *Barranca* encountered on this route from the Pacific is met with. *Barranca* is the name given in Mexico to all deep valleys, ravines, or gulches with steep sides. This word is intended to denominate chasms formed by the slow action of a flow of water on soft and gravelly soil. Where the ground is fertile and the water abundant, the multifarious foliage spread over the steep sides of the barrancas and along the margin of the stream is most abundant; whilst in higher altitudes, where the nature of the soil is unfavourable, barrancas with bare sandy sides are not uncommon. Between Colima and Tonila the barranca region belongs to the fertile class. Babbling brooks, flowing at the bottom of the smaller gulches, thread through beautiful and bushy thickets and gush in miniature cascades. The road lies almost due north, bearing a little to the eastward to avoid the grand Volcan de Colima, at whose foot Tonila is situated. About five miles north of the Volcan another grand peak rears its head, the extinct volcano named Pico Helado, or Frozen Peak. The height of these mountains is about 11,000 feet above the sea-level, and about 8000

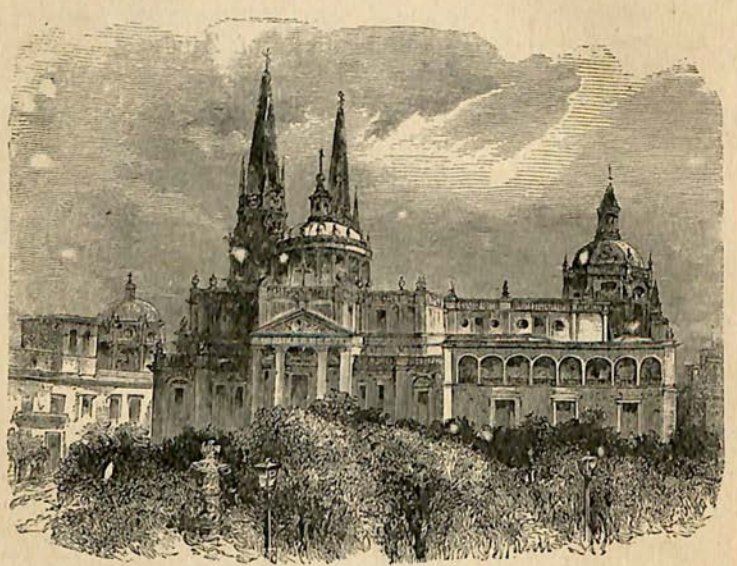
feet above the country from which they rise From Tonila the route lies in a northerly direction along the eastern side of these giants. The numerous ravines on their slopes are densely wooded. The high road passes over masses of broken lava forming the much abominated *pedregales*, as such paths are termed by the diligence-drivers. Thus the State of Xalisco is entered, the most dangerous for travellers in the whole republic, on account of the numerous bands of robbers which infest it. M. Geiger here crossed the *Barranca de Beltran*, considered to be the largest in this part of Mexico. He carefully measured the depth of the chasm, from the plateau to the bed of the stream at the bottom, and found it to be 525 feet; the walls of the ravine being almost perpendicular, down which the road, constructed at enormous labour, takes its zig-zag course. All the larger barrancas of Mexico possess these roads, built in the last century by the Spaniards. They oppose great difficulties in the way of communication between Colima and Zapotlan, and render transport on wheels impossible. All goods must be carried by mules. The mounted escort which accompanied M. Geiger and his companions consisted of twelve men armed with carbines and revolvers, and eight cavalry soldiers carrying breechloading carbines. These guards are tolerably honest, when hired for the purpose and well paid; but should you venture to travel unprotected, they will resume the brigand part of the business, attack and rob you. They are, in short, determined to live on the traveller one way or the other, and alike constitute the evil and supply the remedy. On approaching Zapotlan, cultivated enclosures are met with, carefully fenced off from the wide rugged road by rows of the *nopal* or prickly-pear cactus (*Opuntia vulgaris* and *O. tuna*). The fields are extensively planted with the *maguey* or *metl* (*Agave Mexicana*), so universally cultivated throughout the *Tierra templada*

The plant is put to manifold uses in Mexico. From the sap which oozes from the flower-stem, when cut, a kind of beer is made, the well-known *pulque*. It has the colour and consistency of milk and water, and smells and tastes like yeast. *Mezcal* and *tequile*, two kinds of strong spirits, are likewise manufactured from it. Besides these, the fibre of the thick leaves is utilised for strong rope, matting, and horse-girths. The inhabitants of Zapotlan do not enjoy the best of reputations. They are more or less connected with brigandage; whenever a revolution gives them the opportunity, the male population turn out on the roads in great numbers, to lighten travellers of money, luggage, and clothing. Even priests, who have a powerful hold on these people, are heard of as chiefs of robber bands, and they are ever ready to ignore the misdeeds of their flocks, so long as they attend confessions, and pay the money for absolution, and the like. The town is one of the oldest in Mexico, and contains a population of about 20,000. Its climate, at an elevation of 4300 feet above the sea, is almost perfect.

3. *Guadalaxara—Condition of the Province of Xalisco.*

The State of Xalisco, of which Guadalaxara is the chief town, is one of the largest and most famous in the republic, embracing the greater part of the former Spanish kingdom of New Galicia, and containing a present population of about 960,000. Next to Mexico and Puebla, Guadalaxara is the most important city in the state, although surpassed in population by Leon. It has 75,000 inhabitants, and is situated at an elevation of 5200 feet above the sea-level, beneath a changeless summer sky, blue as the sapphire. It possesses a very fine cathedral, externally painted in blue and gold in a very peculiar manner. There are further a large amphi-

theatre for bull-fights, elsewhere forbidden in Mexico; an opera-house; an excellently-organised hospital and foundling institution, where even mothers of the better classes are accustomed to place their children in order to relieve themselves from the further care of their bringing up; a



CATHEDRAL OF GUADALAXARA.

similar asylum for the aged poor, a college for young ladies, and about a dozen journals. The Cimeterio de Belen would seem, from the descriptions given of it, to bear a striking resemblance to the famous cemetery of the Certosa at Bologna.

But notwithstanding all these indications of civilisation in the capital, the inhabitants of the province are notorious even in Mexico for their lawlessness and indolence. All commercial dealings of a wholesale character are mainly in the hands of English, French, and German

merchants. Brigandage and bad highways are here, as elsewhere in Mexico, the chief obstacles to the development and well-being of the country. Amongst other scandalous instances of disorder there lately occurred the case of the Head Inspector of Police, who was found to be in league with the banditti and *plagiarios*, or kidnappers, by whom the province is infested. The industries are limited to the production of the *dolces*, or sweetmeats, for which the capital is famous, a few cotton-factories, and a large paper-mill. The surrounding Indians are noted for their rare artistic skill, in working admirable little clay figures of every imaginable national type in Mexico.

4. *Road from Guadalaxara to Guanaxuato.*

After leaving Guadalaxara the highroad across this part of Mexico traverses a flat country, here and there varied by slight undulations, and bordered on all sides by distant hills and mountains. Cacti, dwarf trees, and stubbly grass, appear to form the only vegetation. The villages on the road are composed mostly of rough *adobe* houses with thatched roofs, and have a miserable appearance. Little cultivation is apparent, but herds of cattle are frequent. The traveller is led to wonder on what the people rely for their subsistence, so poor does the country seem. The towns and villages swarm with importunate beggars, including cripples of various kinds and most disgusting appearance. An improvement shows itself in the land bordering the *Rio Grande*, the largest Mexican river, which, rising in the Lago de Lerma, about twenty-five miles south-west of the city of Mexico, flows for 600 miles in a north-westerly direction, and empties itself in the Pacific about twenty miles north of San Blas. The valley of this stream, to a width, on an average, of fifteen miles, is generally composed of bottom-lands of the

greatest fertility, and produces wheat and barley of a very superior quality; the land, however, is comparatively little cultivated. Continuing eastward, the country rises again beyond Zapotlanejo, and the arid undulations of the central plateau once more appear to the eastward-journeying traveller. The soil for many miles is composed of a yellowish-brown sand, at times thickly strewn with boulders and stones, and seemingly fit for no other produce but a few crippled cacti. At the small town of Xalostotitlan, a tributary of the Rio Verde is crossed, and a terribly stony ascent then commences to a plateau 7500 feet above the sea-level. After traversing the summit for about eight miles the road suddenly descends and enters a country of glens and small barrancas, all parallel to one another, and at right angles to the road, which winds in and out through a labyrinth of obstacles, down steep inclines, up hills, and across streamlets, until a tolerably well-paved highway is reached, which leads in a zigzag direction down the steepest of the hills to the cheerful little town of San Juan de los Lagos. This place numbers about 8000 inhabitants, and is celebrated for the fair held there annually at the commencement of December, in connection with the festival of the patron saint of the town, Nuestra Señora de San Juan de los Lagos, whose shrine in former times attracted annually so large a congregation of devotees that to legalise their assemblage a concession was granted, in 1797, by King Charles the Fourth of Spain, for a yearly fair to be held at the time of the festival. The cathedral is a magnificent structure, with twin towers of exquisite taste and considerable height, and a majestic and imposing interior. Eastward from San Juan the road again rises to the plateau 7000 feet above the sea-level, more fertile than that farther to the west, and producing maize, wheat, barley, and beans. The fences, instead of being constructed of stones, are formed by the long straight arms of the organ

cactus, lopped off their parent and driven into the ground so close to one another as to leave no perceptible space between them. These pieces quickly take root and grow to a height of more than 20 feet, and as they are from 2 to 6 inches in diameter, they form a strong and suitable protection. Farther eastward on the route, Lagos, a pleasant town of 15,000 inhabitants, is passed, 6300 feet above the sea-level; and a journey of 20 miles farther brings the traveller to the border of the State of Guanaxuato, reputed to be one of the best governed in the republic.

5. *Guanaxuato and its Mines.*

The city of Guanaxuato, founded in 1554, in its architectural features recalls some old Spanish towns. This is partly to be ascribed to its situation in narrow defiles and on steep declivities, resulting in the same crowding together of blocks of houses as we see in old European towns surrounded by fortifications, and which were also frequently enough founded at the confluence of mountain streams. In Guanaxuato, where space is so valuable, the houses are often run up four or five stories high. It has a population of 63,000, who enjoy a comparatively high degree of peace and security. Even at the time of the Spanish invasion this place was already famous for its great mineral wealth, and at present its yearly output of gold and silver is estimated at about £1,750,000. La Valenciena, however, which was formerly the most productive of all the mines, has long been flooded throughout its galleries to a depth of 2000 feet. Within the last two or three years a company has been formed for the purpose of pumping out the water, reopening the works, and subjecting the metalliferous quartz blocks to a crushing and smelting process. An amalgam of sulphur and mercury is employed in extracting the silver from

the ore; and the pumping gear, with the exception of a small steam-engine from Manchester, is worked exclusively by mules. But the most promising blocks alone are submitted to this treatment, the others being applied to building purposes, and it often happens that the wretched dwellings of the poor workmen are streaked with veins of silver. Should the Mexican Government ever abolish the export duty on the precious metals, or the value of silver increase, these dwellings will in all probability be pulled down, and a small percentage of them sent to circulate throughout the world either as coin or products of the silversmith's craft.

Geiger reports that the mines of Guanaxuato are more than one hundred in number, of which fifty-two are at present worked. The total value of the precious metals yearly exported from the State is stated to amount to about six millions of dollars. Owing to the insecurity of the roads the transport of this valuable commodity is undertaken by the Federal Government, in consideration of a charge or tax, and three times a year they organise so-called *conductas*, or convoys, protected by from three to five hundred soldiers, according to the state of the country. In the dry season the coin is conveyed in waggons, and during the rains on mules, on account of the soft state of the ground. Only once in the history of this institution has it happened that a *conducta* was robbed. In this instance it is said that the Government themselves were in such urgent need of funds that they went through the farce of an attack on the convoy, so as to secure the treasure. They, however, only considered it as a forced loan, for some time afterwards all the owners were fully reimbursed.

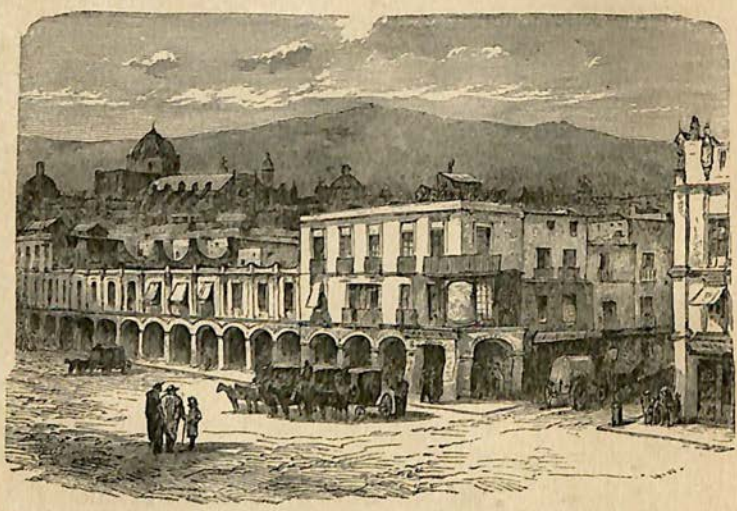
The towns on the highroad between Guanaxuato and Mexico offer little special interest. The land becomes more fertile, and the *haciendas* or farms more numerous,

as Salamanca is approached—the influence of the not far distant river Lerma reaching thus far. It must not be forgotten that the average elevation of the land is here about 6000 feet. The chief towns passed on the road are Salamanca, with a population of 8000, mostly engaged in the old-fashioned style of manufacturing *mantas, sarapes*, and *rebozos;* Celaya, a gay and cheery town with 25,000 inhabitants, rejoicing in a large cathedral and nearly a dozen other churches, and noted for its manufacture of harness and saddles, and other articles of leather; and Queretaro, most picturesquely situated on the summit of a hill, and indelibly associated with the melancholy fate of the Emperor Maximilian, who met with his death on the neighbouring Cerro de las Campanas. The population of the city is given as 55,000 inhabitants, and it ranks in importance as fourth in the republic.

6. *The Capital—Romantic Scenery—Interior of the City.*

Mexico is universally recognised as the finest and most brilliant city in Spanish America. And yet it is not so much its public buildings and monuments, the regularity of its broad and interminable streets, or any of the perishable works of man, but rather the solemn majesty of the incomparable natural scenery by which it is surrounded, that produces such an overpowering and indelible impression on the observer. This is something entirely different from anything suggested by our European experiences. It is no single or individual object, which may often be dreary and repulsive enough, that here rivets the attention. It is rather the indescribable sublimity and strangeness of the whole picture that overwhelms the spectator with irresistible force, filling him with unspeakable rapture and amazement. From the borders of the valley of Mexico the most fascinating view is unfolded

of the giant mountains Popocatepetl and Iztaccihuatl throned in the background. Here are broad, shimmering lakes, sombre cypress and pine groves, waving fields of golden corn, and, as the centre of the whole, the grand old city itself, spreading out far below with the regularity of a mathematical figure.



ARCADES IN THE PLAZA OF MEXICO.

Mexico lies in the centre of the Anahuac table-land, nearly midway between the two oceans, at an elevation of 7465 feet above the sea-level, flanked on one side by the salt lake Tezcoco; on the other by the fresh-water lake Xochimilco, and in a zone of perennial spring. It is a handsome city, and tolerably clean, if we do not pry too curiously into certain slums and waste spaces in the outskirts. It forms a perfect square, the generally well-paved streets, with their broad footpaths, crossing each other at right angles, lying pretty nearly in the direction of the four points of the compass. The streets themselves are

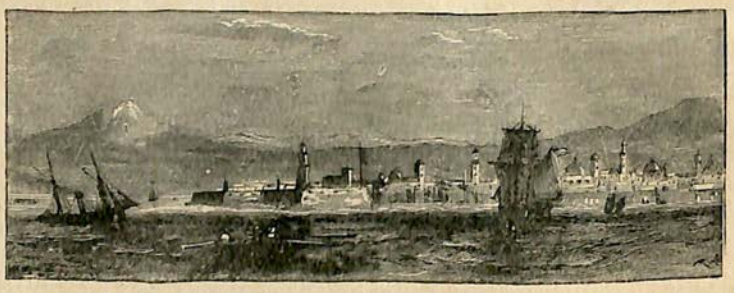
mostly spacious, perfectly straight, and so level that the eye takes them in at a glance from end to end. Those who have visited Turin, in North Italy, will be best able to form a correct idea of the general features and peculiar situation of the city of Mexico. Amongst the leading thoroughfares are the Calle de los Plateros, with its brilliant jewellers' shops, the fine Calle de Aguila, and the interminable Calle de Tacuba, the old Tlacopan highway. A splendid sight is presented by the Plaza, on which stands the wonderful cathedral, overladen with gold, silver, and precious stones, the most sumptuous house of worship in the New World. It was here that the ill-starred Emperor Maximilian caused a magnificent fountain to be erected, in the midst of splendid sub-tropical trees and shrubs.

7. *The Neighbourhood of the Capital.*

The surroundings of the city are delightful, notably the village of Tacubaya, with the handsome villas and country seats of the wealthy Mexicans. These residences, however, notwithstanding the tramway connecting the place with the capital, remain, for the most part, unoccupied through fear of the brigands, who do not hesitate to break into the houses, and carry off their rich owners, exacting a heavy ransom for their surrender. Such things take place, so to say, under the very eyes of the central administration. Over the castle of Chapultepec, situated on a porphyritic hill 213 feet high, and some four or five miles to the south-west of Mexico, there still seems to linger the splendour imparted to it by the presence of the unhappy Emperor. Maximilian greatly improved this place, adorning it with frescoes and statues after the antique. The famous Ahuehuetes (*Taxodium distichum*) of the park at Chapultepec are said to bear the palm of

beauty even from the noble Wellingtonia or Sequoia of California. A curious effect is also produced by the moss hanging from the trees, the *Tillandsia usneoides*, known as the *barba española*, or more briefly, *heno*, hay.

The road towards Popotla and Tacuba leads to the "Arbol de la *Noche Triste*," and to the ruins of an Aztec Teocalli, whose pyramid however in no way resembles the gigantic Egyptian structures with which it has been compared. From the shrine of Santa Maria de Guadalupe, the most renowned place of pilgrimage in the state, the road leads to the Chinampas, or floating gardens of Mexico in Lake Tezcoco, which, although by no means built on *terra firma*, have long ceased to be in any sense "floating."



VERA CRUZ.

8. *Vera Cruz.*

The capital is connected by rail with Vera Cruz, the most important port on the Atlantic seaboard. With its branches to Jalapa, Puebla, and other centres of population in the interior, this is the only line of railway at present completed, but lately other lines have been commenced, or projected, one of which will connect Mexico with the North American systems, and aid powerfully in developing the resources of the country.

Vera Cruz, or, more fully, "la Villa eroica de la Vera Cruz," is one of the most unhealthy places on the globe. This formerly flourishing, but now decayed and filthy town, lies on a beach formed of glowing quicksands; solitary swarthy figures glide stealthily through the broad and straight streets, avoiding the countless carrion-kites to be seen hopping about in all directions in search of offal, or else perched in long rows on the roofs of the houses. Seemingly lifeless, these birds remain for hours motionless on the crumbling walls of forsaken palaces, now in ruins. Here not a tree, a shrub, a spring, or a stream occurs to relieve the sight from the burning sands everywhere in view; in the city itself nothing but cisterns of turbid, tepid water, or else the alternative of the so-called *tienda*, or tavern, usually filled with brawling, half-drunken, or utterly besotten wretches, consuming incredible quantities of the most fiery of raw spirits, and too often at the same time stifling the last spark of human feeling in their breasts.

For eight months of the year yellow fever here rages furiously, decimating the ranks of Europeans attracted to the place by its commercial advantages, nor sparing the Mexicans themselves, who come from the more elevated and healthy parts of the interior, and are compelled to reside for any length of time in this dreaded seaport. But the fatal malaria of the place is harmless to the natives themselves.

Within about 500 yards of the Quay lies the fortified island of San Juan de Ulua or Ulloa, and a little farther off the Isla de Sacrificios.

9. *From Vera Cruz to Orizaba—The Barrancas.*

Beyond the narrow and sterile strip of coast in whose hot sands Vera Cruz lies embedded, savannahs stretch

inland, a hard marl protruding in many places, but especially in the swampy districts, and often enclosing large blocks of porphyry. Farther in the interior, as this character of the land becomes more developed, numerous bushes of mimosæ are met with. We are then at the foot of the Cordilleras, at first gradually ascending and forming the Atlantic slopes of the Mexican table-lands. The vegetation now becomes at every step more luxuriant, until we reach Chiquihuite, a lofty mountain adorned with all the splendours of the tropics.

These regions are almost uninhabited, nothing being visible except a few solitary bamboo hovels roofed in with maguey or palm leaves. Here are no signs of cultivation, nothing but the virgin forest, and nature uncontrolled by the hand of man. A considerable number of mountain streams are crossed, rushing between the rocks down to the plains, and at a distance of 37 miles from Vera Cruz we meet again with numerous deep barrancas traversing the land from west to east. These barrancas are often 1000 feet deep, their walls consisting mostly of steep masses of unfossiliferous limestone, covered above by a thick layer of humus, and here and there containing a few sporadic blocks of porphyry.

The most important towns in this district are Jalapa at the foot of the Cofre de Perote, and Orizaba at the foot of the peak of the same name, the latter place beautifully situated in a narrow valley encircled by lofty hills.

10. *The Cofre de Perote.*

The Cofre de Perote, in about 19° 30′ N. lat. and 97° 8′ W. long., rises in almost solitary majesty near the eastern edge of the great Anahuac table-land. In the language of the country it bears the name of Nauhcampa-

tepetl, expressive of its peculiar form, and which also induced the Spaniards to call it by the name of *cofre*, or chest. The Mexican term means a square mountain, while in the old Aztec idiom it was called Pinahuizapan, that is, near the water.

From a geological point of view the neighbourhood of this gloomy and rugged mountain is peculiarly interesting. The mountain itself consists of a blackish-grey stone, which may be regarded as a species of dioritic trachyte, without any traces of scoriæ, obsidian, or volcanic ash. Nor have any signs of an extinct crater or other aperture on its slopes been detected.

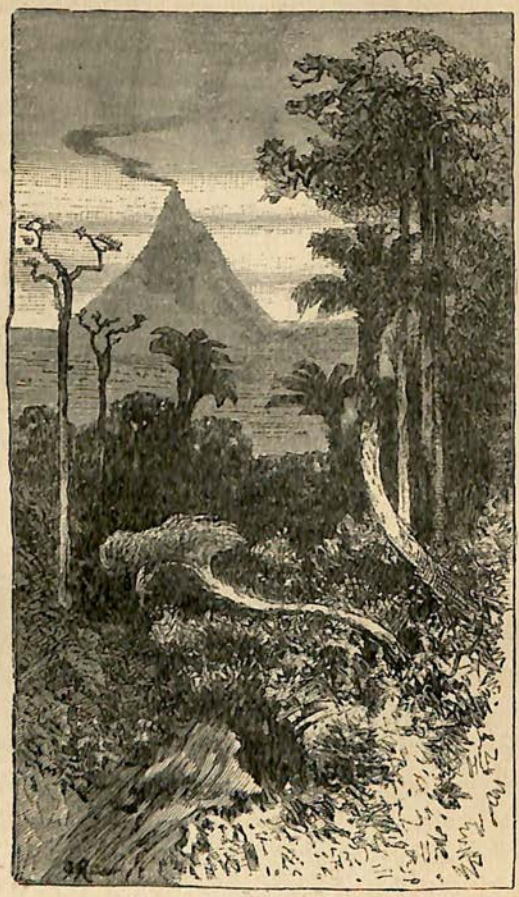
Snow falls in isolated spots on the mountain, as low as 12,000 feet above the sea-level. Of the trees growing on the flanks of the volcano the most noteworthy are the *Pinus occidentalis*, *Cupressus sabinoides*, and *Arbutus madroño*. The oak (*Quercus xalapensis*) reaches no higher than 10,350 feet above the sea.

Although considerably lower than Popocatepetl and Orizaba, the Cofre de Perote is still one of the highest mountains in the country. It belongs mainly to an important lofty ridge, forming the edge of the eastern slopes, and running parallel with the range that separates the caldron-shaped valley of the Mexican lakes from the plain of Puebla. This lofty chain forms a long craggy ridge, at whose southern extremity is the little cube-shaped rock of la Peña.

11. *The Peak of Orizaba.*

The most stately of the whole series of Mexican volcanoes is unquestionably the imposing Peak of Orizaba, admirably described by its Aztec name of Citlatepetl, or "Star Mountain." Though situated at a distance of about 70 miles inland, its snowy summit is visible to ships

for a distance of nearly 200 miles in clear weather. It has been inactive since 1856, but its crater is easily



PEAK OF ORIZABA.

detected from a long way off, its point being truncated in a south-easterly direction. Northwards it inclines at an angle of 45°, resting on a rocky base, which rises in

terraces towards the snow-line, and consists mainly of diorite and phonolite, or "clinkstone," as it was formerly called.

On the northern slope a narrow valley winds through rocks of porphyry and diorite upwards to the ice and snow line, while west of the head of the Xamapa barranca there rises a sheer wall of basalt, where the traces of volcanic eruptions begin to be more abundant. Here we everywhere meet with lava, together with igneous sand and stone rubble, besides quantities of obsidian, pumice-stone, and weathered trachyte. Its irregular elliptic crater is said to be about 8300 feet across its greater axis, lying from W.N.W. to E.S.E., with a slight depression on the south, and its whole circuit measuring from 19,680 to 21,150 feet. The inner walls of the crater, consisting of blackened rocky ledges, sink perpendicularly down, at present showing no symptoms of volcanic action, although vapour rises at several places along the edge of the crater, and a deposit of pure crystalline formation is also visible. Unmistakable lava-streams, consisting mainly of basaltic masses, have undoubtedly been vomited forth from time to time, though little trace of them is now to be seen on the oak and pine covered sides of the mountain.

12. *The Valley of Puebla.*

After ascending the *Cumbres*, or highest elevations along the edge of the Mexican plateau, over which tower the above-described peaks, we again descend to the lower-lying extensive plain of Puebla. As far as Palmar the land is dreary and uninviting. Beneath a thin layer of sand a hardened crust of lava stretches far and wide, a silent witness of the havoc and ruin here formerly wrought by the burning mountains of these regions. Frequent earthquakes alone still keep alive in

the memory the restless and wayward forces ever heaving sullenly in the bosom of the earth, and which have many a time brought sudden destruction on the cities and their inhabitants.

On the undulating plain is grown maguey alone, the large fields of which are enclosed by thick cactus hedges. These lead at last to the table-land of Puebla, which lies 7200 feet above the sea, and is one of the most fertile and best cultivated districts in Mexico. The valley of Puebla, as it is called, although differing in its main features from the eastern regions, is almost equally attractive, with its waving fields of maize, in every stage of growth, from the green seedling to the matured stalk with its large light and dark yellow ears of corn. The valley is intersected in every direction by streams of water, giving life and plenty to the pretty little hamlets nestling in their fruit-gardens, whilst extinct volcanoes still rise in the background. This smiling landscape is lit up by the brightest of suns, and over it wave the purest breezes, heavy with the fragrance of aromatic trees and shrubs, flourishing in this tempered clime, and converting the vale of Puebla into a garden of Eden.

A surprising effect is produced by the aspect of the city of Puebla de los Angeles, with its countless domes and church towers rising far above the surrounding houses. After penetrating the environs, the interior of the city produces an extremely favourable impression. Broad and regular streets lead across spacious squares from one magnificent church to another. In the centre of these streets is a channel, covered with large flagstones, which carries off the torrents of rain that fall during the wet season. The architecture of Puebla is much finer and more original than that of Mexico. The town is also kept much cleaner, and shows far fewer traces of decayed grandeur. The houses are finer, and lack that monotonous

yellow colour characteristic of those of the capital. The partiality of the old Aztec people for bright and warm tints here still finds an echo, often asserting itself with much taste and delicacy. On the whole, Puebla, though with a population not exceeding 75,000, takes the lead of Mexico in many respects. Its inhabitants are more industrious, moral, and enlightened, and altogether far less degenerate than those of the capital.

13. *The Anahuac Table-land—Popocatepetl.*

On the west the plain of Puebla is confined by a mighty mountain range, dominated by the snowy crests of Popocatepetl and Iztaccihuatl, and separating the Puebla table-land from the still more elevated plateau of Anahuac, properly so called. As far as the eastern limits of this range, the road leads through a most delightful district, spreading out on either side like a park covered with the richest meads, and adorned with splendid timber. Here the haciendas are well built, and a marvellous growth of vegetation lends an irresistible charm to the scene. But after ascending the dividing range, we gradually exchange a region of leafy trees for one where flourish those of coniferous growth. We at last enter a magnificent forest of cedars, white pine (Lord Weymouth's pine), and splendid firs of many species, with their long, light green needle-like leaves hanging down in thick tufts.

Emerging from this, we at length gaze down on the Valley of Mexico, where the chief feature of the landscape, besides the less interesting Iztaccihuatl, is the "smoking mountain," as is interpreted its Aztec name of Popocatepetl. But its primitive name is rapidly falling into abeyance, the noble peak being now generally called the volcano of Puebla, or simply *El Volcan*. It is the highest mountain in the whole of North America, resemb-

ling in its geological structure Chimborazo in the Andes of Ecuador. The pumice-stone does not crop out through the crystalline formations until we pass the line of vegetation. The upper limit of trees is marked, as is usual on the Mexican mountains, by a zone of conifers, beyond which the ground is still covered with various grasses, sundry species of compositæ and *caprifolium*, a dwarf plant producing a sort of cotton, until these also vanish at the snow-line, 15,000 feet above the sea.

The crater, mostly of black basalt, and inclined towards the south-east, has a diameter of 5320 feet, and a depth of from 1000 to 1600 feet. Its walls sink almost perpendicularly down, and have a circuit of four to five miles. The crater constantly emits bubbles of fetid gases with a strong smell of rotten eggs, and consisting of sulphuretted hydrogen. A dull rumbling noise is also heard, increasing as we draw nearer to the crater's mouth, out of which, as well as from the exterior sides of the crest, there rise columns of smoke, often coming from a great depth and assuming very graceful forms.

At the foot of the eastern slope of Popocatepetl, at an elevation of 7445 feet above the sea, stretches the broad and marvellous lava-field of Malpais de Atlachayacatl, a low trachyte cone on whose slopes the Rio Atlaco has its source.

Recent investigations have led to the discovery of enormous beds of pure sulphur on Popocatepetl, far superior in quality to that of Naples and Sicily. Apart from the doubtful ascent by Diego de Ordaz, supposed to have been undertaken at the command of Cortez, this volcano was for the first time scaled by the brothers Glennie and Don Juan Tayleur, on April 20, 1827; it has since then been repeatedly climbed, the most recent ascent being that of Prince Starhemberg and Baron Thielmann, on February 21, 1876. The travellers on this occasion were agreeably

surprised to find themselves in no way affected by the usual consequences of breathing the extremely rarefied atmosphere of such elevated regions. On their return they were let down from a perpendicular height of 2600 feet in a little over fifteen minutes, by means of the apparatus used in conveying to the plains below the sulphur extracted from the interior of the crater.

CHAPTER VI.

PHYSICAL FEATURES OF MEXICO.

1. *Climatic Conditions.*

IN a country of such vast extent as Mexico, spreading over no less than seventeen degrees of latitude, it may well be imagined that the climatic conditions must be very different in its various parts, even if we take into account only the effect of latitude on temperature. But if to this consideration be added the peculiar configuration of the land, the varied elevation of which necessarily affects, and partly conditions, the amount of rainfall, degree of heat, and other atmospheric relations, it becomes still more difficult to present a general picture of the climatology of such a vast and varied region.

Lying between the isothermals 82° and 59° Fahr., south and north respectively, Mexico enjoys a mild climate in the north, which grows warmer in the centre, and becomes tropical in the south. But this general distribution of the temperature is often greatly modified by local conditions, necessitating a more detailed consideration of the several main divisions of the country.

2. *Vertical Zones of Climate.*

It has been already pointed out how the surface of the land gradually rises in terraces from the coast to a great height, not only on the table-land of Anahuac, but

in the central regions generally. This difference of elevation occasions a greater degree of heat in the low-lying districts along the coast, which constantly diminishes as the ground rises towards the great table-lands of the interior. Hence it happens that these central plateaus, notwithstanding their southern latitude, enjoy a much milder climate than many low-lying regions farther north.

These differences of temperature the Mexicans denote by the expressions—*Tierra caliente, Tierra templada,* and *Tierra fria* (warm, temperate, and cold districts); but it would be a mistake to suppose that this distinction rests on a scientific basis. It is, on the contrary, merely a popular conception, varying according to the different localities. Humboldt, with his love of generalisation, has endeavoured to bring these expressions into harmony with the actual hypsometrical conditions, which, though not always possible, is still, on the whole, the most convenient method for a general consideration of the varieties of temperature.

The *Tierra caliente* comprises the low-lying districts chiefly bordering the sea-coasts, where, under the stimulating influences of a warm and humid atmosphere, all the characteristic productions of an American tropical climate find their natural home. In this zone of low elevation the sugar-cane is the most typical vegetable growth, and it is only in the Tierra caliente that its cultivation and the manufacture of sugar are carried on with success. The cacao or chocolate-tree also prospers in this warm region. The banana, indigo-plant, coffee, and cotton-trees, although not so strictly confined to the lowest levels, flourish with their greatest luxuriance in this region. The range of altitude approximately fixed as the zone of the Tierra caliente is from the sea-level to 3000 feet, and the mean annual temperature ranges from 77° to 82° of Fahrenheit; the extremes being 59° to 104°. In Mexico, as in most other parts of Central America, this region is unhealthy to Euro-

peans, and the seat of such fatal diseases as the yellow fever and black vomit. Both maladies attack chiefly foreigners, and inhabitants of the interior who visit the coast. Black vomit commences, as an epidemic, towards the end of April, when the hot weather sets in, and continues until October, in which month and in September it reaches its height. It is a remarkable fact that this disease ceases at that altitude at which the Mexican oak commences to appear (*Quercus xalapensis*), that is, at 2750 feet. These characteristics of the Tierra caliente render it ill adapted for the settlement of Europeans. On the coast of the Caribbean Sea the temperature is much cooled at times, in the months from December to March, by the prevalence of northerly winds—the so-called "northers,"—which, at Vera Cruz, depress the thermometer often to 60° Fahr. The Tierra caliente is distinguished by a vast number of species of animals and plants which are not found in the higher zones, and which are more allied to the tropical forms farther south. It embraces the strip of naked sandy coast-country bordering the shores of the Gulf of Mexico, on which stands Vera Cruz, the chief seaport of the republic, and all the lower slopes of the eastern face of the mountains, on which the rain-clouds, brought by the warm easterly winds, discharge their plentiful moisture, and nourish the growth of the rich tropical forest which clothes the land. Farther south and east, in the states of Tabasco and Yucatan, its horizontal extent enlarges, and it extends in a narrow belt across the isthmus of Tehuantepec, to the Pacific, along the shores of which, northward and westward, it again forms a narrow edging, gradually widening as it approaches the Gulf of California. Acapulco, the chief seaport on the Pacific coast, and the valleys of Papagayo and Peregrino, are amongst the hottest and most unhealthy places in the whole of America. Amongst the vegetable growths which flourish

in the hot zone thus defined, are multitudinous species of such families as palms, arboreal araceæ, mimoseæ, cassiæ, bauhinias, and all the tribes of woody creepers and lianas, tillandsias, epiphytal orchids, and bamboos; in short, wherever the virgin forest has remained undisturbed, the vegetation presents the same features, both as regards general physiognomy and details, as everywhere characterises the forests of tropical America. But the species are, for the most part, different from those of the forests nearer the equator. The same may be said of the animals—mammals, birds, reptiles, and insects—which people the luxuriant shades. Tropical American genera are here represented by tropical Mexican species, almost always different from the allied species found farther south, even at no greater distance than Nicaragua and Costa Rica.

The *Tierra templada*, or temperate zone, embraces all the middle levels of the Mexican uplands, having an altitude of from 3000 feet to 8000 feet above the level of the sea. The annual mean temperature prevailing in this zone is from 62° to 70° Fahr., the extremes being 50° and 86°. In this favoured region there reigns perpetual spring, and the towns of Jalapa, Tasco, and Chilpantzingo which lie within it, are celebrated for the beauty and salubrity of their climate. The transition from the *Tierra caliente* is made in many parts very gradually, and a distinct line of demarcation is rendered all the more difficult, as, in certain conditions of soil, and exposure to warm winds, the plants and animals of the lower hot zone advance to a greater altitude than they do elsewhere. The most characteristic feature in the flora of the *Tierra templada* is the evergreen oak, which forms magnificent woods in all favourable situations; in the sunny openings of which fly many of the same species of butterflies as are found in temperate latitudes of North America. Great heat and great cold are alike unknown in this favoured

region. The air is soft, fragrant, and pleasantly moist, the vegetation is always green, and in suitable situations the fruits, vegetables, and cereals of Europe yield abundant harvests. In situations near the edges of the table-lands facing the sea, the condensation of the moist air-currents produces almost constant cloud and mist; but the more central parts, including the neighbourhood of the city of Mexico, have their regular dry and rainy seasons. The winter "northers" which blow in the Tierra caliente along the shores of the Mexican Gulf as a dry wind, are transformed into moist gales on the slopes of the interior; and, whilst at Vera Cruz, during their continuance, a clear cool sky prevails, the districts of Jalapa and Orizaba are enveloped in cloud. It is found that five or six times as much rain falls in the *Tierra templada* as in the higher plateaus, and in Cordoba the precipitation is two and a half times greater than in Tepic, on the shores of the Pacific.

From 8000 feet upwards all the interior districts are classed under the denomination of *Tierra fria.* The air at this elevation is more rarefied, keener, and drier, and nature assumes a new and peculiar aspect. The sky is clear and cloudless, the vegetation has lost all traces of its tropical character, and is no longer abundant or luxuriant, but often scanty and dwarfed. The oaks of the temperate region occur but sparingly, and their place is taken by coniferous trees, the principal of which is *Pinus occidentalis.* Wheat and barley are, however, successfully cultivated at these elevations, and with them occur many species of wild plants characteristic of the plains of the northern temperate zone. The mean annual temperature is about 60° Fahr.; the extremes varying between freezing-point and 75° Fahr. The *Tierra fria* embraces all the higher parts of the interior plateau. In the city of Mexico, which lies on the borders of the zone, the thermometer sometimes, but rarely, descends in the winter to the freezing-

point; but the winter is not to be called severe, for the mean temperature of a winter's day ranges no lower than between 55° and 57°, corresponding in this respect with the climate of Naples. The heat of the summer, on the other hand, is moderate, the temperature in the shade being not higher than 75°. At higher elevations than the metropolis, viz. about 8506 feet, the climate, even to a foreigner from northern Europe, strikes raw and cold; the vale of Toluca, at a height of 8800 feet, and the summits of Guchilaqui, have a mean temperature of only 42°-46°; the imported olive-tree there cannot ripen its fruit, although in the valley of Mexico, a few hundred feet lower, it is cultivated with most successful results.

The *Tierra fria* includes the long stretches of mountain summit which extend from Tehuacan to Chihuahua; they possess but a scanty vegetation, and have a sandy and barren soil. The high plateau of Anahuac has generally the same character; a few stalks of grass, here and there a cactus clump, a stunted juniper, or a half-dried yucca, constitute nearly the whole vegetable growth of this poorly watered and unsheltered soil, which only during the rainy season acquires a somewhat richer clothing of grasses and shrubs, to wither again as soon as the dry period of the year returns. This description of the higher plateau holds good, however, only for those parts of it which are distant from the rivers which flow across it; wherever there is water, accompanied by a margin of alluvial soil, the land is exceedingly fertile. Such districts may be classed amongst the most productive and enjoyable that the world contains.

3. *The Seasons—Distribution of the Rainfall.*

While, on the one hand, the temperature is materially affected by the elevation of the land above the sea-level,

this very circumstance determines, on the other, the greater or less amount of rainfall, and consequently also to some extent the variation of the seasons themselves. In Mexico there are four distinct seasons north of 28° N. latitude only; everywhere else, that is, in by far the greater part of the country, there are generally not more than two—the *estacion de las aguas*, and the *estacion seca*—the rainy and the dry seasons. In the tropical latitudes the dry season lasts usually from October to the middle of May, and the rainy thenceforth to the end of September. But the precise beginning and end, and the greater or less regularity of the rainy season depend exclusively on the position and mean elevation of each locality. Still this period occupies roughly the whole of summer, during which the parched and drooping vegetation is again clothed in luxuriant green, new germs spring from the soil, and all nature bursts rapidly into bloom and maturity. With each succeeding day the rain begins a little earlier, until at last, about eleven o'clock before noon, the whole sky is overcast, discharging, between one and two in the afternoon, a regular tropical downpour. The showers last generally till midnight, leaving the early morning clear and bright. On the elevated uplands it seldom rains for several days continuously, and after two or three weeks a few sunny days begin to appear, constantly increasing in number, till at last the rain ceases altogether.

Besides this constant summer rainfall, there occur also occasional storms and showers, most frequently in December, January, and especially February, when they are called *aguas nieves*. This time is succeeded by the pleasant dry period of the year, which lasts till May. The rainy season on the coasts is not synchronous with that of the uplands, and, as a rule, it may be said to begin first on the Atlantic seaboard, gradually spreading westwards in the line of the trade winds.

4. *Hot Springs—The Bramidos of Guanaxuato—Earthquakes.*

Associated with the volcanic nature of Mexico are the hot and tepid springs bursting out of the ground in many places, and the most noteworthy of which are the Aguas de Comangillas.

These waters are at Chichimequillo, 6400 feet above the sea, on the 21st parallel, not far from the rich silver mines of Guanaxuato. The strongest of them show a mean temperature of 205° Fahr., when the thermometer in the atmosphere marks 68° Fahr. They bubble up more or less vigorously from many parts of the spongy soil, and wherever a hole is dug within a circuit of 50 paces diameter, the water immediately rushes out with a loud noise.

At the southern foot of Mount Cubilete, near the farmstead of Aguas Buenas, 6546 feet above the sea, warm springs flow from some porphyry breccia resting on micaceous dolerite. The water has a mean temperature of 106° Fahr., is tasteless, perfectly clear, and when cooled precipitates a light-yellow sediment. Close to Istapan there are also several mineral springs, bursting out with such violence that in one place a volume of water, thick as a man's body, rises to a height of 2 feet. It has a temperature of 80°, and contains sulphate of soda, together with carbonate of lime, deposited along the numerous little channels of the spring in such a way as to form small hardened beds, along which the water flows in a clear stream. The smell indicates the presence of sulphuretted hydrogen in small quantities. The rocky ground round about Istapan consists of mountain limestone resting on metamorphic schist or slate.

Remarkable also are the hot sulphur springs of Atliaca, about seven miles below Mirador, in the direc-

tion of Vera Cruz. The most considerable of them has a temperature of 80° Fahr. The mineral spring at Guadalupe contains common salt, some iron and carbonic acid. Peñon de los Baños also contains common salt, besides sulphate of soda, chloride of calcium (fixed sal ammonia), gypsum, and carbonic acid.

A singular phenomenon, also the result of volcanic action, are the *Bramidos* of Guanaxuato, a place situated on the Mexican table-land, at some distance from the still active volcanoes. Here was heard a low rumbling noise like thunder, first on January 9, 1784, which continued for the space of a month, varied with a few short peals, but unaccompanied by the least trace of earthquakes. This underground thunder, restricted to a small part of the mountain range, and from which the terrified people fled in consternation, gradually died away as it had begun, nor has it ever since been repeated.

Earthquakes, according to Professor Heller, are not rare in Mexico, but they are more frequently comparatively harmless *temblores* than genuine *terremotos*, and are seldom very destructive. They are often attended by underground sounds, and the ruin of a few houses, and even of larger buildings, but are not accompanied by other volcanic phenomena, although unmistakably associated with the presence of the numerous volcanoes in the country.

5. *Minerals—Gold, Silver, Copper.*

Of the minerals found in Mexico the most valuable are the "steppe salt" of the sandy or clay districts; the "bitter salt" of Tepeyac; gypsum also at Tepeyac; native gold in the Vetamadre, with horn-silver in seams, consisting of quartz, brown hæmatite in a clayey matrix, mingled with ochreous iron-ore. At lower depths occur red and white silver ores, sulphuret of lead (lead glance), common

iron pyrites, besides brown and black blende (mock ores) in quartz and calcite seams. Virgin gold is seldom found at Tepeyac, and not in compact masses. It occurs in seams, consisting alternately of quartz, sparry sphero-siderite, and limestone, amethyst, chalcedony, and horn-stone. But in a porphyritic mountain at La Candellaria, near Guarisamey, pure compact gold is found both in laminæ and disseminated in quartz and calcite seams. Pure gold has become rare in Pachuca, while it is found mostly efflorescent or disseminated in the mines of La Luz and S. Bernabé.

Silver is by far the most important metal in Mexico, where is annually produced more than half of the silver-yield of the world. Here it is often found in combination with chlorine and horn-silver, and the *colorados*, as these ores are there called, are widely diffused throughout the country, though most abundantly in the Sierra Madre. Of the many silver mines, the most famous are those of Guanaxuato and Zacatecas for the extraordinary richness of their lodes.

Copper is produced in far less quantities than silver. In the neighbourhood of Guanaxuato it exists in a pure state, and arborescent in El Rosario, at some distance from S. Sebastian, in Sinaloa. But copper-green, with red oxide of copper (red copper-ore), malachite, and blue carbonate of copper, are found mostly as nodules, and in small quantities only, at Chipinque, near Cuencamé.

CHAPTER VII.

POLITICS IN MEXICO.

1. *Government—Cause of the Failure of Liberal Institutions.*

THE foregoing chapters have been devoted to a description of the country and people of Mexico. A few remarks remain to be made on its political condition, before passing on to the more southern republics of Central America.

The form of government is that of a federal and democratic republic, framed on that of the United States; but from the first day of its creation to the present time, it has never been able to adapt itself to the circumstances of the country. The North American constitution, as we shall see farther on, is a thoroughly natural and logical development of political conditions which existed at the time it was founded. In Mexico, on the contrary, the introduction of a constitution modelled on such a prototype, involved a complete rupture with the past. The men who had been kept in the apron-strings of political pupilage to Spain, who had been drilled after a strict and uniform fashion, and governed with irresponsible despotic power by the mother country, were suddenly called upon to play the part of free citizens, to conform to the principles of self-government, voluntarily to submit to the necessary restraints thereby entailed, and further, to recognise the equality of the Indians, hitherto treated by the State as irrational beings.

It needs no great knowledge of human nature to see that such an experiment must inevitably lead to the most disastrous results. In truth, no teaching has ever been more amply vindicated, not in Mexico only, but throughout the Spanish domain in America, than the often despised doctrine that freedom of itself alone is utterly powerless to lead nations onward to a higher culture and progress, being itself rather the result of a long national training in the arts of government. In other words, nations must be educated to freedom before it can be safely conceded to them.

2. *Political Disorders.*

The neglect of this fundamental truth has been productive in Mexico, and elsewhere in Spanish America, of those political disorders and crimes which cannot be contemplated without disgust. With but few exceptions, the history of these lands, from the time of their severance from the mother country, has been an unbroken succession of intestine wars and lawlessness, attended by every conceivable horror and atrocity. Nothing is sadder than the ever-recurring reports of these eternal revolutions, pronunciamientos, in which the passions run riot, and all the more savage instincts of humanity are fostered, all better impulses extinguished—in which, in a word, falsehood and treachery, selfishness and villany, are worshipped under the mask of fair and specious phrases.

It is as useless as it would be hopeless to burden the memory with the individual phases of these party struggles, each closely resembling the other in their minutest particulars. Neither the events themselves, nor the leaders in them, whether painted in the brightest hues of all the virtues by their partizans, or else in the darkest shades of all the vices by the opposing faction, could ever succeed in inspiring us with the least interest in their details.

3. *The Emperor Maximilian—Consequences of his Fall.*

Mexico, however, has at least succeeded in giving variety to the monotony of its political disorders, by the sad episode of the empire. It was, perhaps, worth while to make the attempt to reduce to order the entangled affairs of the country by for once placing their direction in honourable and unselfish hands, such as the republic had never witnessed.

A war with England, Spain, and France, and at last with France alone, paved the way by which the Austrian Archduke Ferdinand Maximilian ascended the Imperial throne of Mexico in 1864. The brief interval of his rule forms the only bright spot in the gloomy history of Mexican revolutions, and the loss the country has endured by his overthrow can be estimated only by comparison with what had been previously accomplished.

The Emperor Maximilian fell at Queretaro on June 19, 1867, pierced by the bullets of that faction which opposed the foreigner professedly through the most disinterested motives, for the good of the fatherland alone, and for the sake of the free institutions of the commonwealth. After the victory, it therefore became incumbent on them to give their contemporaries some proofs of the virtue with which they accredited their own principles. Unhappily, the attempt to do so has ended in total failure. Since the Indian Benito Juarez became President, and many others of the same race have filled the position of governors and other high offices of State, the Indian element has begun to assume a decided preponderance in Mexico, a result that can only be looked upon as a decidedly retrogressive step. But, unfortunately, the Conservatives themselves (mostly whites) have not kept abreast of the times. They have, doubtless, more outward show of culture, but they still hold tenaciously by the rights of the Church and other

antiquated privileges, and are accordingly compelled to play false to the ideas of political and religious equality which the Constitution of 1857 endeavoured to engraft on the nation.

4. *Recent Reforms—Obstacles in the way of real Progress.*

But, in order to inspire the masses with more enlightened views and aspirations, the Liberal Government has done much towards the establishment of public and training schools, the development of commerce and industry, by means of railways, telegraphic lines, canals, etc.; latterly even transplanting the most ultra-liberal European ideas to Mexican soil, by declaring war against the Church and all its belongings. Unfortunately, apart from the material improvements flowing from it, European enlightenment is out of place in Mexico, where it is incapable of being appreciated, and must continue to be excluded all the more in proportion as the Indian element gains the ascendant. In the south, the Indians of Yucatan and Chiapas, instead of adopting the civilisation of the whites, prefer to make systematic attacks on their settlements; while in the north we find the dreaded Apaches and Comanches successfully maintaining their stubborn resistance to civilising agencies.

Thus it is that, in spite of the false glitter with which an apparent adoption of European notions has dazzled the eyes of too partial observers, Mexico has even in recent times degenerated into the anarchy and misrule characteristic of the earlier history of the republic. Since the days of Maximilian, another sanguinary revolution has raged, devastating one town after another, and the troops, as usual, have showed themselves as regardless of their own honour as they are indifferent to the public tranquillity.

To these evils is superadded the general misery arising

out of the uncultivated state of the country, agriculture and commerce being arrested, while the taxes are continually on the increase. Manufacturers are consequently driven out of all the larger towns, the internal trade diminishes, and foreign commerce, entirely in the hands of strangers, dwindles to insignificant proportions.

5. *The Legislative Bodies—Political Dishonesty—Social Corruption—Gloomy Prospects.*

The Mexican Congress, which shows a total lack of real statesmanship, usually raises its sittings without having done anything for the welfare of the State, and an attentive study of the proceedings in the various provincial legislative assemblies inspires the conviction that the people's representatives have but little regard for their own honour, sharing as far as possible in the general system of plunder which is the order of the day from the highest to the lowest in authority. Hence one might almost say that by all sections of the community a universal war is waged against property, by the brigands on the one hand and the public functionaries on the other. "With us nothing is organised except robbery," said an excellent Mexican to Countess Kollonitz in the year 1864, and the statement remains true to this day.

As with the Congress, so with the Government, which, with the best intentions, still lacks statesmen competent to grapple with the situation. Through this deplorable state of things one of the richest lands in the world has been reduced to a nation of mendicants, and not only the Central Government but those also of the several States have but succeeded in exposing themselves to universal obloquy.

CHAPTER VIII.

THE PENINSULA OF YUCATAN AND BRITISH HONDURAS.

1. *Physical Aspect of Yucatan.*

YUCATAN is a somewhat outlying province of Mexico, having but little commerce or intercourse with the rest of the world. Sandbanks along the coast keep ships at a safe distance from the land; the soil is calcareous, and the land rises but little above the sea-level. The whole province consists of a vast plain, varied with a few uplands and a solitary mountain range. The soil, though not deep, is fruitful, the great drawback being a deficient supply of water. The whole central part of the country is destitute of rivers, the rainfall seeming to filtrate through the porous upper strata, and it is sufficient, in places to all appearance perfectly arid, to dig to a small depth in order to obtain a good supply of the needful fluid. The climate, though tropical, is healthy, and the vegetation similar to that of the American tropic regions generally; without, however, forming those dense forests which cover nearly all the other lowlands of tropical America.

2. *Population—Products—Indian Serfdom.*

Of the 422,000 inhabitants four-fifths are Indians and Mestizoes; their principal occupation being agriculture, and the chief products of the country horned cattle, hemp (the fibre of a species of agave), and

Indian corn. But cotton, coffee, tobacco, and sugar, are also cultivated, though not extensively, and a little trade is carried on in logwood and guano. The country is destitute of mineral wealth. The farms are generally very large, and worked by gangs of Indians, housed in hovels made of stakes kept together with hides, and covered with clay. The relation of these Indians to the white owners of the land is one of vassalage little removed from actual slavery. Each family receives a hut, a piece of ground, and the right of drawing water from the common well. In return for this every male member of the family is bound to give up to the planter one day in the week. Everything they require is supplied and set down to their account by the master, and paid by them in labour. They are thus always in debt, and consequently tied to the land. They may, no doubt, leave the plantation as soon as they have paid their debts, but this is very rarely the case. The lash also is permitted by the law, and often freely applied.

3. *Government—Commerce—The Capital—Social Habits.*

The various towns have little intercourse with each other. The government is republican in name, but in reality not unfrequently a military dictatorship. In the south-western parts there is a district occupied by nomad Indians, who live by their forays amongst the settlements along the border, plundering everybody that falls in their way. But, with this exception, security of life and property prevails everywhere.

A regular monthly service of steamboats is maintained between New York and Sisal, *vid* Havannah, and occasional smaller vessels are freighted with cargoes of logwood, hides, and the like, for Havana, Vera Cruz, and the United States.

The towns in their outward aspect have much in common with Havannah. The capital, Merida, with a population of 35,000, boasts of many fine public buildings. The streets are broad, and at right angles, the houses large and solidly built in the Spanish style—a central court surrounded by a corridor, leading from which are the various apartments. Their occupants are hospitable and very sociable, one might almost term them pleasure-seekers, so often is the serious business of life lost sight of. The Roman Catholic is the exclusive religion, and seems to have some hold on the people.

4. *Ancient Indian Ruins—Uxmal.*

Ruins, that have attracted universal attention to this corner of the earth, are found scattered in groups nearly all over the peninsula. Merida itself lies on the site of Tihoo, an old Indian city, the materials of which have been used up in the building of its successor. The sculptures and carvings of a bygone age are still to be seen amongst the walls of the present houses, and nearly all the stone buildings in the province have been constructed out of the materials supplied by primeval Indian structures.

The best preserved and grandest ruins in Yucatan are those of Uxmal, 40 miles to the south of Merida. They have been admirably described by J. L. Stephens, who carefully investigated their details on the spot, and who is accepted as the best authority on the subject by Mexican antiquarians. Other places in Yucatan where these remarkable architectural remains have been found, such as Izamal and Chitchen-Itza, to the east and south-east of Merida, and the island of Cozumel off the eastern coast, are considered by archæologists to have been important religious centres of the old Maya nation; but

Uxmal was a city, the capital and royal residence of the Cocomes kings, after the destruction of the old metropolis, Mayapan. After the overthrow of the monarchy and the ancient civilisation by the Spanish invaders, Uxmal and its neighbourhood, lying remote from the new European settlements, were neglected and forgotten. Its magnificent palaces and sacred edifices were not therefore dismantled to supply building material for new towns springing up by their side, and they remained for many generations in tolerable preservation; indeed there is documentary proof to the effect that the Indians, as late as about the year 1650, continued to worship in the slowly-decaying temples.

The principal structures of Uxmal occupy a space of about a square mile in area, choked up with trees, woody brushwood, and all the strange forms of tropical vegetation, which have also overrun the buildings, and assisted by the lusty growth of their roots in interstices of the stonework to hasten their decay. The grandest palace, called the *Casa del Gobernador*, forms a narrow parallelogram, 322 feet long, built entirely of worked stone, and having on all four of its sides a deep cornice of richly sculptured stonework, the lower part of the façade being of smooth stone. In front are eleven doorways leading into a double series of chambers; but the wooden doors (which existed in 1688) have disappeared, and the lintels fallen in. The sculptured cornice is varied, and not symmetrical in design; but the richness and elegance of the details produce an agreeable general effect. Figures over the doorways, representing each a cacique, warrior, prophet, or priest, seated on a kind of throne, and having a lofty head-dress of enormous plumes of feathers, are the most notable objects. Above these the sculpture for about five feet all round the building exhibits, in its varied detail, the continued repetition of a grotesque design, somewhat resembling a hideous human face, the

nose of which is a long curved stone projecting far from the surface of the façade. Each stone has been sculptured by the unknown workmen to make part of a whole —a kind of sculptured mosaic, having a symbolical meaning, to which there is no clue.

The other chief buildings of Uxmal differ much from the above in general plan, forming quadrangles which enclose courtyards of imposing dimensions; their façades differ also greatly. One edifice, 240 feet long, called the Casa de Palomas, presents, along the centre of the roof, a range of stone structures, nine in number, of pyramidal form, pierced with small oblong openings, which give the appearance of a gigantic row of pigeon-houses. But a special interest attaches to certain artificial mounds, rising to heights of from fifty to eighty feet, on the summit of each of which stands a long narrow building, reached by a broad and steep flight of steps. The general form of these mounds is that of a truncated pyramid, and antiquarians are agreed that they were the places where the priests of the ancient race offered sacrifice to their deities. Similar mounds are found at most of the sites of these ancient Indian towns, and the Franciscan convent at Merida is built on one of them. The great pyramid at Izamal offers the further peculiarity of forming two pyramidal piles of masonry, one on the top of the other; the base of the whole structure measuring no less than 820 feet on each side, and the first platform 650 feet. The construction of state buildings on the summit of the highest of a series of terraces, appears to have been a leading principle of ancient Indian architecture. It is well shown in the Casa del Gobernador at Uxmal, the base, which forms three successive terraces, holding aloft the wonderful building, and imparting to it its grandeur of position. The lowest of these terraces, built up from the level of the ground, is 575 feet long, 15 feet broad,

and 3 feet high; the second is 545 feet in length, and 20 feet high; and the third 360 feet long in front, and 19 feet high. From the centre of the second platform a grand flight of steps, 130 feet wide, leads to the summit on which the building stands; with this exception there is no means of ascent from one terrace to another, except an inclined plane at one end of the building, leading from the first to the second platform.

At Uxmal the vigorous tropical vegetation is slowly but surely accomplishing the destruction of these wonderful relics of an extinct civilisation. Mr. Stephens found, on revisiting the place after the absence of a year, that great changes had taken place during even that brief lapse of time. The sides of one of the lofty structures, on his former visit bare and naked, were now covered with high grass, bushes, and weeds, and on the top were young trees twenty feet high. The foundations, terraces, and tops of other buildings were overgrown; weeds and woody creepers were rioting and creeping on the façades and mounds; terraces and ruins were a mass of destroying verdure. A strong and vigorous nature was struggling for mastery over art, wrapping the city in its suffocating embraces, and burying it from sight. It is fortunate that ample records of these fast perishing remains have been secured by the aid of photography since the visit of Stephens; but antiquarians and ethnologists find in the sculptures but little to guide them in reconstructing a picture of the social, political, and religious life of the ancient people who built these palatial structures. Owing to the absence of a written language, or, at any rate, of a literature, and the unmeaning character of the sculptures, little of a satisfactory nature can be inferred respecting the people. The civilisation and social structure were destroyed, together with the power of the chiefs, by the Spanish invaders, whose bigotry and ignorance prevented them from

leaving any intelligible record of the unique phenomena of which they were the witnesses. And so complete was the destruction, that the present Indian inhabitants, although lineal descendants of the civilised Mayas, have lost even the tradition of their ancient greatness.

5. *The Maya Indians and the Half-caste element.*

Of the Indian tribes in Yucatan, by far the most important and interesting are the Mayas. They are of smaller stature and more thickset than the North American Indians. They are distinguished by their small hands and feet, and comely appearance, and display great powers of endurance. They are reserved and submissive, but avoid and mistrust the white man. They are also strangers to the cheerful temperament of the Negro, being rather indifferent and passive, without curiosity or ambition.

The mixed races, on the other hand, reside by choice with the whites, performing all the menial work, and being often employed as overseers, whereas the pure Indians are never placed in positions of trust. The natives are bigoted Catholics, and are under the absolute control of the clergy. They are indolent, fond of sight-seeing, and readily attracted by the splendour of the numerous feasts of the Church.

6. *Belize, or British Honduras: Extent—Rivers.*

On the east coast of Yucatan, Great Britain has retained possession of a territory, generally named from Belize or Balize, its chief, or rather only town, but the official title of which is British Honduras. The strip of coast comprised in this settlement extends from Amatique Gulf northwards to Chetumal or Espiritu Santo Bay, the

deepest inlet along the east coast of Yucatan. The area of the colony is 13,500 square miles, and the population in 1870 amounted to 24,710 souls. The river Hondo de Chetumal forms the frontier line towards Mexico; next to which the most important stream is the Belize, a long tortuous river, winding through a wooded valley between long pine-clad ridges, at whose mouth is situated the above-mentioned town of Belize, over against the island of Turnereffe. Of its population, variously estimated at from 5000 to 12,000, the majority are Negroes and Indians, the latter including both natives of the country and Caribs transplanted hither from the West Indian islands, who have long, however, been tainted by constant alliances with the African. Off the coast is an almost continuous line of coral reefs and cays, within which is a protected line of shore navigation.

7. *Exports—The Mahogany Trade.*

The principal products of the colony, forming the staples of the trade of Belize, are cochineal and mahogany. The mahogany tree (*Swietenia mahogani*) attains its greatest development and grows most abundantly between 10° N. lat. and the tropic of Cancer. It flourishes best on the higher crests of the hills, and prefers the lighter soils. North of Belize, along the banks of the New River, there are also found forests of logwood. The mahogany tree is found in abundance along the banks of the Usumacinta and other large rivers flowing into the Gulf of Mexico, as well as in the larger islands of the West Indies. It is described as one of the most majestic and beautiful of trees, rearing its huge crown of shining green leaves far above all the other growths of the forest. Its trunk is often 50 feet in height and 12 feet in diameter, and ramifies higher up into so many arms that the shadow

of its crown covers a vast extent of surface. British settlements for cutting and shipping the valuable and useful timber of this tree were established as long ago as 1638 and 1640, and the right to the territory has been maintained by Great Britain against the pretensions of Spain and the Spanish Republics to the present day, chiefly on account of the importance of this branch of industry.

The season for cutting the mahogany usually commences about the month of August. Gangs of labourers are employed, consisting of twenty to fifty each, under the direction of a "captain;" each gang has also a "huntsman," whose duty it is to search the trackless forests for suitable trees to be felled and to guide the woodcutters to the places. The felled trees of the season are scattered over so wide a space, that miles of road have to be made to reach them, and numerous rude bridges constructed over the rivers that lie in the way. All the larger logs have to be "squared" before they are brought away, on wheeled trucks along the forest-roads made for the purpose. By the month of March or April the business of felling the trees and trimming the logs is completed; it is then the dry season, when the roads are hard, and the laborious task of wheeling the trucks to the banks of the rivers commences. A gang of forty men is capable of working six trucks, each of which requires seven pair of oxen and two drivers. Arrived at the river, the logs, previously marked with the owner's initials, are thrown into the stream. The rainy season has now commenced (May or June), the waters rise and a powerful current carries the floating timber towards the sea; the logs being guided by the men who follow in canoes. A boom placed across the river near the port of embarkation stops them, when each gang of men separates its own property from the rest, forms the logs into rafts, and brings them to the

wharves of the proprietors, where they undergo a final process of smoothing with the axe before exportation.

The operations of the mahogany-cutters often extend far into the interior and over the borders into Guatemala and Yucatan, and besides the ordinary dangers and accidents to which they are exposed whilst engaged in such labour in the tropical forests, the outlying parties are subject to be attacked and carried into captivity by the wild frontier Indians, who retreat with their prisoners into inaccessible recesses of the forest, whence the men can be rescued only on payment of a ransom.

CHAPTER IX.

GUATEMALA.

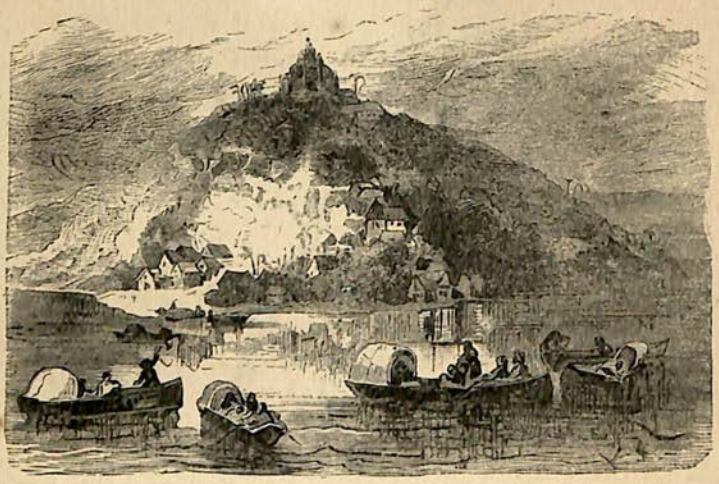
1. *Extent—Population—Configuration of the Land.*

Of the Central American republics, strictly so called, the most populous is Guatemala, the south-eastern neighbour of Mexico. Its superficial extent is estimated at 41,830 square miles, and the number of its inhabitants at 1,200,000. With the exception of the marshy lowlands near the Atlantic seaboard, the domain of the State is mainly comprised in a large tract of table-land, forming a continuation of the Central American Highlands, which here rise and expand, and are much varied by narrow valleys and moderately-elevated mountain ranges. In the south-west, flanking the interior plateau, there runs a succession of volcanoes parallel with the Pacific coast, northwards connected with Soconusco in Mexico, but southwards extending along the whole Pacific seaboard of Central America, and attaining an elevation of 11,800 feet and upwards.

2. *Lake Peten—Flores—The Golfo Dolce—The Carib Half-Castes.*

The northern districts of Guatemala beyond the Rio de la Pasion, and stretching away to Yucatan and British Honduras, are still but little known. Here lies the lovely Lake Peten, with the little town of Flores on one of its

islets. In the neighbouring hills in all probability rises the Usumacinta river, whose source has never yet been visited by the white man. This great stream forms at



FLORES.

first the frontier line between Guatemala and the Mexican State of Chiapas, lower down separating this state and Tabasco from Campeche. Together with its tributaries it flows through a region of magnificent tropical forest, which spreads over the whole country south as far as Coban, and under the stimulating influence of a copious rainfall attains the acmé of luxuriance. On emerging from this forest northward towards Lake Peten, vast open savannahs, curiously varied with countless small conical wooded hills, form a welcome change in the scenery.

In the east a small strip of the Atlantic seaboard round about Amatique Gulf, and between Belize and the State of Honduras, belongs to Guatemala. The Gulf of Amatique itself, at the head of the Bay of Honduras, is further connected with the Golfo Dolce running far

inland, the connecting link being formed by the lakelet known as el Golfete.

Here lies the pretty little romantic village of Livingston, with not more than fifty huts, occupied by a mixed Carib tribe, speaking a Negro-Spanish dialect. Altogether, the Caribs along this coast have little right to claim descent from the true Caribs of the Eastern Antilles, the finest race in the New World, now, however, almost extinct. These Caribs of the mainland are rather Zamboes; that is, descendants of Negroes and Indians, though, like the insular Caribs, they were formerly noted and dreaded as pirates. They are still good seamen. Their pirogues cover the Golfo Dolce in quest of the turtles which they dispose of in Belize, receiving for a single fine specimen enough to keep them "like gentlemen" for a whole week.

3. *River and Lake Izabal—Romantic Forest Scenery.*

Into the Golfo Dolce falls the lovely little river Izabal, whose upper course, covered with tropical virgin woodlands, leads to the sequestered Lake Izabal, often confused on the maps with the Golfo Dolce. The village of Izabal has 200 huts inhabited by Indians or Ladinoes, amongst whom reside a few English and Spanish traders, this place being the only outlet towards the Atlantic for the produce of Guatemala, brought down from the capital through Zacapa and Gualan to Izabal.

The primeval forest along the banks of the Rio Izabal is nightly enlivened by the trumpet-notes of frightened birds, the deep growl of the jaguar or American tiger, the chattering of the apes on the slender branches of the liana, or the hissing of the snake falling on some nest of unfledged parrots. By day the eye feasts on the sparkling emerald of the mountain stream flowing between some rocky cleft, overgrown above by a tropic vegetation, and

richly adorned with all manner of trailing and twining plants. Lovely birds of the most gorgeous plumage light up wood and mead, while beautiful butterflies hover from blossom to blossom. The tropical character which we have before alluded to as characterising the animal denizens of the *Tierra caliente* of Mexico, is here intensified, and a larger proportion of South American types is noticed amongst the species. A great diversity of magnificent orchids are found on the forest trees; and the ocellated turkey, with the wonderful bronze sheen on its plumage, and eye-like spots on its tail, is one of the most peculiar of the feathered denizens of the eastern river valleys. But the wayfarer must guard against the scorching rays of the sun as he wanders by Fort San Felipe, an old structure dating back to the period of the conquest, and whose walls have never yet been scaled by any enemy save the countless climbing plants profusely covering them. At night he will have to seek repose in some Indian rancho, for the dusky children of the land are still hospitable, although themselves doomed to a weary life of hardships. The husband, a hewer of the hard-grained mahogany, returns late from the forest, while the wife must attend during the day to her household duties, and make provision for their frugal evening meal. This will often consist of the eggs of the iguana, a large species of lizard, whose flesh is itself esteemed a great delicacy. These sequestered Indians find their greatest happiness in their children, beautiful in their simple nakedness, and especially remarkable for their lovely gazelle-like eyes.

4. *The Road to Gualan and the Capital.*

The road leading through a rocky and wooded country to Gualan is an almost invisible track, bearing the grandiose title of the King's Highway (*el Camino real*), not in

irony, or through republican hatred of royalty, but through a thorough conviction of its excellence. Its best feature is the sweet perfume of the citron, vanilla, and other still more fragrant aromatic plants by which it is pervaded all the way to Gualan, a small provincial town of about 900 families, on the little river Motagua. From the neighbouring and still larger town of Zacapa an extremely rough highway leads to the capital, Guatemala.

5. *Climate—Soil—Products—The Coffee region of the Pacific Coast.*

In Guatemala the same distinction is observed as in Mexico between the three zones of elevation forming the hot, temperate, and cold regions. On the plains along the coast, and in the low-lying hilly districts, there prevails a uniform tropical heat, with an annual mean temperature of 92° Fahr. In the rest of the country there is a dry period from February to April, and a rainy season from July till September, with an intervening transitional stage lasting two months. The elevated plateau in the interior, like that of Mexico, is deeply furrowed with steep wooded ravines, or *barrancas*, but it is of less extent, and much interrupted by valleys and mountains; the cold higher districts are called "Los Altos." The soil would seem to be everywhere very fertile, but its products vary according to the elevation of the land above the sea. In the higher uplands wheat, barley, and other cereals are grown, in the vicinity of dusky pine-woods; while a luxuriant vegetation, having all the character of the tropical American forest, flourishes in the low-lying plains.

The principal products of Guatemala are maize, sugar-cane, indigo, coffee, cocoa, and cochineal. As in Mexico, the maize is everywhere cultivated; in the Tierra templada and Tierra fria yielding one, in the hot coast districts

two, and in some places three annual crops. The sugar-cane can be grown everywhere to an elevation of about 5000 feet, which is also very nearly the extreme limit of coffee. Wheat flourishes only in the Tierra fria above the line of 5800 feet; while cacao, the proper growth of the Tierra caliente, reaches not much higher than 1600 feet, In the same zone, and a little higher, rice, cotton, and indigo are produced, but in inconsiderable quantities. The cacao, sugar, wheat, and cotton are mostly, if not altogether, consumed in the country, cochineal and coffee alone being regularly exported. The cultivation of cotton is yearly on the increase, while that of cochineal remains stationary.

Of other products, we may mention tobacco, dyewood, and the choicer timbers; silver mines are worked in the neighbourhood of Alotepeque.

The coffee plantations of Guatemala are situated chiefly on the lower slopes of the mountain range facing the Pacific. This long tract of country, so richly endowed by nature,—remarkable alike for the splendour of its scenery, the fertility of its soil, and the amenity of its climate,—has been recently traversed by an English traveller, Mr. Boddam Wetham, in the course of an extensive journey through the Republic. In spite of the disadvantages presented by the want of good roads, and the liability to which the planter is exposed of losing most of his labourers at a moment's notice, in the event of being required for military service, many foreigners have settled in this region, and devoted themselves to coffee cultivation. The plantations are situated between 2000 and 4500 feet above the level of the sea,—heights at which coffee grows best; and hitherto there has been no disease, showing that all the conditions for good crops are extremely favourable. The original seed—the Arabic variety—was introduced into the country about eighty

years ago by French colonists. It was first tested in the island of San Domingo. The starting of a new plantation is a work requiring considerable practical knowledge, as nursery-beds have to be prepared and tended for the growth of the young plants before transplanting, and the planter has to wait five years before he begins to receive a return for his outlay. According to an estimate obtained by Mr. Wetham, a plantation of 1000 trees, costing at the end of five years 27,700 dollars, will yield a net profit of 41,300 dollars.

The descent from the highlands of Guatemala to the coffee-growing zone is very rapid. In a few hours the traveller has left the Tierra fria, passed through the Tierra templada, and is approaching the hot region. The vegetation rapidly changes; alpine flowers give place to plants of a more luxurious foliage. The mountain sides now appear covered with ferns and creeping vines, growing in profusion under the lofty trees, and the deep ravines are almost hidden in a thicket of greenery. Occasionally magnificent views are obtained over the coast plains seaward; the tree-clad hills of the foreground slope gently away, and beyond stretches a velvet carpet of waving tree tops, as far as the white shore of the sea. The intense green of the expanse is varied by the paler tints of sugar plantations, and the dark shade of coffee groves; a silver line streaming through the woven woods, marking the course of a river, with a few small huts dotting its banks, the only sign of life in the ocean of forest.

The roads of the country are broad green glades running through the virgin forest, frequently crossed by mountain streams. On both sides of the path there is a bewildering diversity of rare shrubs and plants, whose leaves and branches are united in tangled confusion by innumerable lianes to the gnarled trunks and spreading limbs of the lofty trees. The grand old ceiba trees, in

particular, are of enormous proportions, their trunks and boughs forming a nursery for a prodigious variety of parasitic plants—ferns, quaint orchids, arrow-leaved Caladiums, and rows of pale grey Tillandsias, and stiff sword-leaved Bromelias. The lofty coral trees form also conspicuous objects, their leafless branches being adorned with red blossoms of peculiar shape and rare intensity of colour, contrasting with the bright orange-tinted masses of flowers which cover the massive dome of the Sapote tree. Nor are the harmonies of the sun-lit vaults confined to vegetation alone: there is a chime in the morning air, as birds fly from tree to tree; one beautiful little fellow, with blue head and crimson breast, piping forth a tiny strain, which is soon eclipsed by the brilliant notes of the amber-and-black plumaged oriole. Silver-blue butterflies, with wings nine inches in expanse, flit about heavily and lazily, and restless humming-birds skim swiftly from flower to flower. In the neighbourhood of the scattered villages groups of Indians are met with pursuing their avocations, the most frequent being women carrying fruits, or oval pitchers of water, gracefully balanced on their heads; their crimson kerchiefs and light blue mantles, coquettishly adjusted, giving colour to the scene.

At Chitalon, 2800 feet above the sea-level, a fine view of the volcanic chain, running east and west parallel to the Pacific, is seen. From the top of a house in the town Mr. Wetham counted eleven volcanic peaks. The graceful forms of Mounts Santa Maria, Zunil, and San Tomas, stand out clearly, in apparently close proximity; away to the right rise the bare summits of Santa Clara, San Pedro, and Atitlan; and still farther on are visible the rugged heads of Fuego (the "Volcano of Fire," near the capital), and Acatenango. The outlines of the mountains are defined with wonderful clearness against the dark blue sky.

6. *Vegetation—Ornithology—Noxious Insects—The Jigger.*

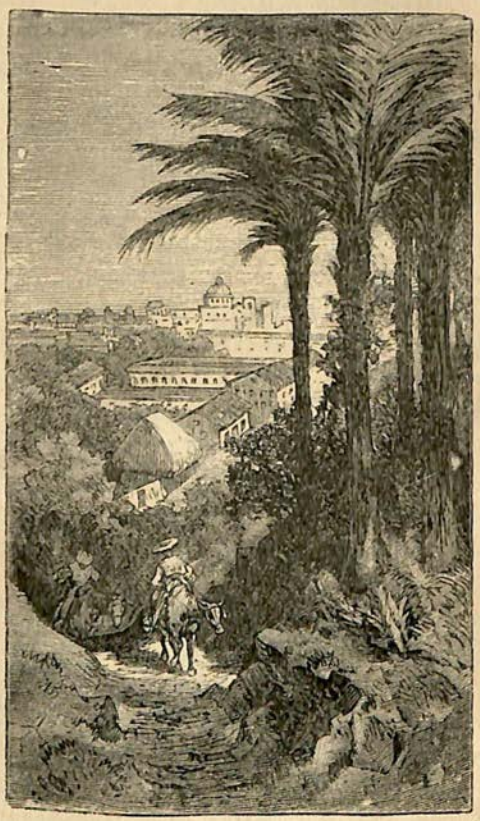
Of the trees on the uplands, strangers are especially struck with the oak, which is smaller and much softer than the European species, but bears acorns as large as the largest Turkey eggs. Amongst the more costly woods, prominent are the cedar, a species of palisander, the so-called rosewood, and the palmolatla, a yellow wood streaked with grey and brown veins.

To the market of the capital are brought all the fruits of the tropics, while in the woods may be seen the loveliest members of the feathered tribe in the whole world; foremost amongst them the quetzal (*Trogon resplendens*), with whose plumes the old Mexicans made their famous Gobelins-like feather paintings. The wings and back are of the most brilliant emerald and gold, the belly a fiery red, while the feathers of the tail, when full grown, attain a length of 3½ feet. Since 1871 the Republic has adopted this magnificent bird as its emblem. Humming-birds, parrots, tanagers, and toucans are met with everywhere. Lovely, also, is the plumage especially of the carpenter-bird—fiery red, with silver or gold—and of a species of ringtail, as large as a dove, with blue bill, green throat, red wings, and one large white and black feather in the tail.

Nor is there any lack of serpents, the venomous species of which, however, are now found only in the dense woodlands and wildernesses. Guatemala is also richly endowed with obnoxious insects, amongst them terrible *niguas* (the jigger or chigoe), a species of flea which embeds itself in the skin of the feet, causing the flesh to fester unless promptly extracted. Formidable, also, on account of their numbers, are the fleas, nowhere so plentiful as in the churches.

7. *The Old and New Capitals—Escuintla.*

There are but few large towns in Guatemala, foremost amongst them being the capital of the republic bearing the same name, which is situated on a spacious



GUATEMALA.

upland plain, presenting a dreary aspect. Its broad and straight streets, running at right angles, are but little frequented even during the day, and their chief promenaders are the Indians and their mules, together with the

indispensable *zopilotes*, or scavenger vultures. The houses are painted a glaring white, and show towards the street one window only, barred with heavy, projecting iron gratings. Owing to the frequent earthquakes, they consist, as a rule, of a single ground-floor. In the interior they enclose a quadrangular arcade and court, embellished by people of taste with fountains and flowers, but beyond this there is no such thing as a real garden in the whole city.

OLD GUATEMALA.

Guatemala is a healthy tropical town, but owing to its great elevation dangerous to those suffering from affections of the chest. A long nine hours' walk along narrow paths through wild and romantic woodlands leads thence to Antigua, or old Guatemala, which was forsaken by its inhabitants after the terrible earthquakes of 1773, most of its public buildings lying now in ruins. As we approach the old capital the view becomes at every step more open, while higher and higher appear to tower above the neighbouring hills the twin volcanoes "del Fuego" and "de la

Agua," that is of "Fire and Water." From this point the way leads by Ciudad Vieja, or Old Town, down to Istapan on the Pacific coast, playfully described as a seaport, but really situated at the mouth of a little stream blocked by sandbanks, which bar the approach of any but the merest cockle-shells.

About midway towards the coast, on the western slope of the mountain-range, lies Escuintla, a sovereign watering-place for those whose only ailment is *ennui*, hence the head-quarters of all the wealthy idlers in Guatemala, who here assemble to enjoy their "summer outing." The neighbourhood is delightful; innumerable cold, tepid, and hot springs being met with at every step, bubbling up beneath the shade of the mango, cocoa, and other tropical fruit trees.

8. *The Quiché and other Indian Tribes—The Old Cacique Families.*

The population of Guatemala naturally presents the same varieties as are elsewhere met with in Central America. The Indians, by far the majority, belong to several tribes, amongst which the most famous is that of the Quiché, who have a brilliant past to boast of. Cities now in ruins, but still witnesses of the old Quiché civilisation and power, are found in the hilly districts of the country. The Quichés have a sacred volume, known as the Popol-vuh, recording the historical traditions of the nation.

The Indians dwelling on the hills are of a kindly disposition, tall, well formed, and of lighter complexion than the lowlanders. They cultivate a little maize, occupy themselves with poultry and swine breeding, as well as hewing wood, in order to procure the means of paying their tribute. The parents sleep in hammocks, but the children on mats laid on the hard ground. The men wear a cotton shirt (manta) and pantaloons, and

instead of shoes, a strip of cowhide fastened round the foot. The women limit their costume to a blue and red striped cotton skirt, while the young Indian girls come every morning to the market of Escuintla in a still more restricted garb, consisting of a little smock reaching to the hips, and a bright fillet binding up the hair. The children run about unhampered by a vestige of clothing.

All strangers accost the men as José (Joseph), and the women as Maria, whatever be their name. The Indian never lays aside the *machete*, with which weapon he hews himself a way through the bush, fells timber, or wards off his assailants. Firearms he is seldom provided with, and never discharges them without first shutting his eyes. On the mountains there are said to be four or five prosperous little communities of light-coloured Indians, with rosy cheeks, fair hair, and blue eyes, known by the title of Hijos de Caciques, or "sons of the ancient chiefs." There are even now to be found a few old Indians descended from the Caciques, or former kings and chiefs, still highly revered, and enjoying the greatest influence over the coloured populations. Alfred de Valois, when in Ciudad Vieja, made the acquaintance of one of these noble Cacique families, consisting of a venerable old man, who still retained a sense of the former greatness of his forefathers, and two daughters, who, though only about twenty years old, seemed already somewhat aged. To the question why they were not married, one of them replied, because she could not find a suitable husband. "My daughters," further explained the old man, "can only marry men of their own rank. We are poor, sir, but we belong to an old race."

9. *Society in Guatemala—Class Distinctions—Foreigners.*

Society in Guatemala is divided into three classes—the people (*el pueblo*), the gentry (*los decentes*), and the

aristocracy (*los nobles*). By "el pueblo" are understood the Indians, forming two-thirds of the capital, the hideously ugly Zambos, whose features would offer the most unique models for the designers of masks, and the Ladinos of the lower orders. Utterly repulsive is the sight presented by the crowds of beggars, clothed in foul rags, their feet eaten away by the jiggers, and tainting the very atmosphere as they pass in gangs through the streets. They are all supported by public charity, and however often he may knock no mendicant is ever driven from the door.

The "gentry" form the majority of the Ladinos or Mestizoes, in the capital constituting one-third of the population. Here they belong to good society, for they claim to be Creoles, and this claim is readily admitted, where so few have any right to pry too curiously into the antecedents of their neighbours. The Ladinos are engaged in trade and the learned professions, devoting their spare time to politics—that is to the deposing and setting up of Presidents—and they are politically liberals, though of a very milk-and-water type. They are the most energetic supporters of the *Lucios*, as all insurgents are called in Guatemala, from a former arch-rebel named Lucio.

Lastly, the "nobles" comprise the wealthy merchants and the clergy, who from their political colours are known as the *serviles*. Nothing better characterises this shopocracy, and the social condition of the country generally, than the notice conspicuously displayed in large letters over their warehouses: *Aqui no se fia*, "No credit given," which may be more freely rendered: Here no man trusts his neighbour, and all business is conducted strictly on ready-money principles.

The Spaniards still resident in Guatemala also belong chiefly to the mercantile class. The other Europeans here resident trouble themselves with nothing beyond the

debtor and creditor side of the ledger. Some of them have sugar and coffee plantations and mills, but generally they are only temporarily settled, quitting the country as soon as they consider they have realised enough to justify them in retiring from business.

10. *Government—Politics—Liberal Ideas—Material Progress.*

For many years Guatemala was under the despotic government of the president Rafael Carrera, sprung from the lowest ranks of the Indian element, who, though ruling with a rod of iron and partly bound by the silken cords of the Jesuits, at all events succeeded in maintaining order and tranquillity, thereby promoting a certain material prosperity. A subsequent government adopted a liberal policy. It banished the Jesuits, and confiscated all the property of the religious communities, devoting it to the support of schools, colleges, and charitable institutions. Thus there has recently been founded at the expense of the State a higher educational establishment for girls, the first of the kind in Central America. Efforts have also been made to construct good highways, of which the want is still much felt. A decree has even been promulgated compelling every male adult to work three days on the roads, or else to find a substitute.

CHAPTER X.

HONDURAS.

1. *Outlines—General Physical Features—The Plain of Comayagua.*

THE Republic of Honduras, having a territory calculated at 39,600 English square miles, but with a very scanty population, lies to the east of Guatemala, and is on the south-west nearly cut off from the Pacific Ocean by the little State of San Salvador, leaving it on this side nothing but a small strip of coast round the head of the bay of Fonseca. On the other hand, in contrast to Guatemala, Honduras extends for a considerable distance along the Atlantic seaboard. Its southern and south-eastern frontier line towards the Republic of Nicaragua is but vaguely defined; the Cape Gracias a Dios on the 15th parallel must be taken as its extreme limit on the Caribbean Sea.

Honduras is, speaking generally, a hilly country, being intersected in various directions by mountain ranges and ridges branching off from their common basis, the central table-lands. These elevated uplands are entirely interrupted in Honduras by the great plain of Comayagua, whence extends the valley of the Rio Humuya due north to the Atlantic, and that of the Rio Goascoram due south to the Pacific. The courses of both rivers thus form jointly an extensive valley, spreading from ocean to ocean. The streams themselves rise on the same plain, their sources being parted only by an inconsiderable elevation forming the southern limits of the plain of Comayagua itself. In

its greatest extent this plain has a length of about 40 miles, with a mean average width of from 5 to 15, its longest axis running due north and south, and coinciding with the course of the above-mentioned streams. Northwards it is separated by a low line of hills from the plain of Espino, itself of no inconsiderable extent, both together forming a lovely region, comprising about one-third of the country between the Bay of Honduras and the Gulf of Fonseca.

2. *Mountain Ranges.*

East of the plain of Comayagua there rises a lofty range, the northern section of which is called La Sierra de Comayagua, and the southern La Sierra de Lepaterique. To the north-east of the Comayagua range lies the cluster of the Sulaco hills, rising nearly in the centre of the state, and supplying the sources of a number of streams which flow in the most opposite directions. At the foot of these hills stretch the elevated grassy plains of Plancho and Yoro, famous even in Central America itself for their magnificent herds of cattle.

The rivers on these slopes of the central mountains wash down gold, but the greater part of the extensive tracts lying between the Sulaco range and the Atlantic Ocean—that is to say, nearly half of the whole country—is inhabited exclusively by a number of isolated Indian tribes. In fact this region is at present but very little known; still it is certain that the character of the land varies greatly, and that it is fertile, and also rich in minerals. A portion of the northern coast lies very low and is densely covered with forests, mahogany especially growing here in large quantities. But towards the east the hills extend quite to the coast at some points, at others approaching very near to it. The Omoa range, with its culminating peak,

8000 feet high, towers above the Gulf of Amatique, while those of Congrehoy and Poyas are almost washed by the Atlantic, their peaks, from 5000 to 7000 feet in height forming conspicuous landmarks far out at sea.

3. *Flora and Fauna—The Seaports of Truxillo and Amapala—Fonseca Bay.*

The vegetable and animal kingdoms are here represented by species as varied in form and as gorgeous in colour as in Guatemala and the other Central American states. The banks of the river Ulua and other streams in the western part of the country are the favourite haunts of a rare species of Toucan, with beak of many colours, belonging to the genus *Pteroglossus*, while the streams themselves form convenient water-highways for the cutters of mahogany.

Truxillo is the seaport of Honduras on the north or Atlantic coast, but the place presents little to attract the stranger, its inhabitants being exclusively devoted to their commercial interests. On the bay of Fonseca lies Amapala, which was declared a free port in 1868. This bay forms one of the finest harbours in the world, consisting, strictly speaking, of a series of deep and spacious basins penetrating into the land, and capable of affording shelter to innumerable vessels. The project formed a few years ago to connect this bay by a railway with the safe harbour of Port Cortes or Caballos, on the Atlantic, the line running through the plain of Comayagua, has fallen through at present, after entailing on the poverty-stricken republic the enormous foreign debt of six millions sterling, only a short section of the line, on the Atlantic side, 53 miles in length, being constructed with a portion of the borrowed money.

4. *Inhabitants—Social Habits—Degraded Condition of the Women.*

The population of Honduras is calculated to number only 250,000 souls. . There is not much to be said respecting the inhabitants, which is not almost equally applicable to those of the neighbouring states. Of society and family life, as we understand them, there is no trace, white women being scarcely ever met, and legitimate unions being as rare as a snowfall in those latitudes. Whites, Caribs, and Indians, contract marriages only for limited periods, the woman so honoured being further obliged to play the part of "maid of all work" for the time being. She never sits at table, dresses more or less elegantly according to her earnings, and when her lord is prosperous, has other menials placed under her control. These women smoke strong cigars, wear bright, many-folded, furbelowed gowns, and a full white bodice—their chief ornament, however, consisting of the long fringed shawl thrown with a grand air over their shoulders. Should the breadwinner be satisfied with his helpmate, the contract is prolonged by tacit consent, and so they jog along until at last comes the inevitable crash.

Here, as elsewhere in tropical America, work is held both in horror and contempt. The people are ashamed of labour, and will continue to pine in misery rather than work for an honest livelihood.

5. *The Dead City of Copan.*

One of the remarkable sights in Honduras are the ruins of Copan, now overgrown with a dense and luxuriant tropical vegetation. Diego Garcia Polacio seems to have been the first European to visit them, but they have been since then investigated by Stephens. They are situated

in the mountainous interior of the country, a few miles distant from the Guatemalan frontier, and about midway between the Pacific and the Atlantic.

In a state of preservation far inferior to that of the palatial remains of Uxmal and other places in Yucatan, they offer, at the present time only dilapidated fragments of buildings and monuments, many of them covered with sculptured figures and hieroglyphics, of similar inscrutable character to the other relics of the mysterious past. Among the most interesting of the remains are numerous monoliths scattered about, some erect, others fallen, and almost buried in the ground, and half-concealed by weeds and underwood. A recent traveller has described one of these as more than eleven feet in length, its width three and a half feet, and its thickness three feet. On the front side is represented the figure of a man with strange and complicated head-dress and breastplate, the figure deeply cut and surrounded by florid carvings; the reverse side consists of sixteen tablets, each containing emblematic figures. Each monolith contains a representation of a similar human figure—probably an idol—but the emblems and hieroglyphic carvings vary greatly. Remains of walls are seen, forming quadrangles, in which the monoliths and portions of sculptured idols are found; the separating walls having sides sloping up in terrace-like steps to a height of more than 100 feet. In subterranean chambers a large number of red earthenware jars have been found, which held human bones buried in lime. Sacrificial altars, enormous stone skulls, and sculptured death's heads, also occur, which combine with the other remains to warrant the conclusion that this place was a great centre of priestly power, and used chiefly for sacrificial and other religious ceremonies. It seems probable that the ancient city of Copan was not situated at this spot, but at the present village of the same name built on a small plateau overlooking the Copan river, about a mile distant from the ruins.

To Honduras belong also the Bay Islands, in the Caribbean Sea. They are fertile, provided with good harbours, and, lying a little to the north of Truxillo, are well suited for military stations. The largest and most populous of them is Ruatan, 31 miles long by 9 or 10 broad, with the excellent harbour of Puerto Real, or Port Royal, facing the mainland.

CHAPTER XI.

SAN SALVADOR.

1. *Geological Formation—Volcanoes—the River Lempa.*

THIS smallest of the Central American Republics belongs geographically to Honduras, closely resembling it in its orography, climate, and other physical features. Seen from the Pacific, the plateau, comprising the greater part of the country, presents the appearance of a mighty wall upheaved by nature, with a low range in front, but separated from the western seaboard by a line of cone-shaped volcanoes. It looks almost as if the ocean waves had once penetrated to the foot of this mountain barrier, and that the low coast range, not more than 2000 feet high, had been subsequently upheaved by volcanic action. At all events this ridge is separated by the River Lempa from the Honduras table-land, and is entirely of volcanic origin. On it rise no less than eleven conical burning mountains, continued by Tigré Island into the Bay of Fonseca; and the traveller passes from one end of the State to the other over a bed of scoriæ and ashes, containing large quantities of pumice, here and there interrupted by masses of lava and volcanic rock.

From the plateau flows down to the Pacific the already mentioned Rio Lempa, the most considerable stream in the state, with its tributary the Rio Sumpul, forming, for a part of its course, the frontier line towards Honduras. The valley of this river is one of the loveliest and most fertile regions to be seen anywhere in the torrid zone.

San Salvador is noted for its earthquakes and the violence of its numerous volcanoes. The capital has been repeatedly destroyed by earthquakes and volcanic eruptions, the last time on April 16, 1854, when most of the inhabitants erected new dwellings on a neighbouring site, which was called Nueva San Salvador. One of the most fearful eruptions of the neighbouring Mount Izalco was that of May 19, 1869. In March 1873 the new capital was partly destroyed by a series of earthquakes and eruptions from the same volcano, lasting fifteen days.

2. *Products: Indigo—Caoutchouc—Balsam.*

The principal articles of agricultural produce are indigo, coffee, and balsam or balm of Peru, the latter grown along a great part of the Pacific coast, distinguished on that account by the name of Costa de Balsamo. Of the tobacco grown, one variety especially is noted for its exceptionally strong narcotic properties. The sugar here produced is of various qualities; but famous above all is the indigo, surpassing in delicacy of colour that of Guatemala and Bengal, and being, in fact, the very finest in the world. It is the chief staple of the export trade of the country.

As in all the coast districts of Central America, there are in San Salvador also a great number of indiarubber-producing trees. A peculiar product is the *mate*, a kind of tea, yielded by a species of hulva or prickly palm. We may also mention the silver coins of San Salvador, not because they are distinguished by any particular form, but because they contain less alloy than any other silver coins in circulation.

3. *Population—Reforms—Education.*

Of all the Central American Republics, San Salvador

is the most densely populated. Its area amounts to only 9594 square miles, and the ratio of population is as 45 persons to the square mile. Of the 435,000 inhabitants, about one half are Indians, and not more than 10,000 whites, a statement which will render superfluous any further description of the political and social relations of this State. It may, however, be mentioned that San Salvador has for some years past entered on a vigorous course of reform. Attendance at school has been made compulsory; but the schools themselves are too few and too far apart from each other. Nevertheless, both parents and teachers neglecting the education of their children and pupils are liable to a fine of ten shillings "for each offence," however this may be interpreted. All games of hazard have also been declared illegal, always excepting those established for the benefit of the clergy. The native population are more inclined to civilised pursuits than in the neighbouring States, and are largely engaged in agriculture: in recent years the working of iron mines has been also undertaken.

The political history of San Salvador for many years has been limited to the usual frequent "pronunciamentos," or military revolts, superseding the popular vote in the election of Presidents, and to its internecine war with the neighbouring republic of Honduras. It has not, however, crippled its credit, and injured its future chances, by contracting, to the extent carried by many other Spanish American Republics, a large public debt in Europe, and repudiating the payment of interest thereupon.

San Salvador was constituted a separate State in 1853, when it dissolved its federative union with Honduras and Nicaragua.

CHAPTER XII.

NICARAGUA.

1. *Climatic and Geological Features.*

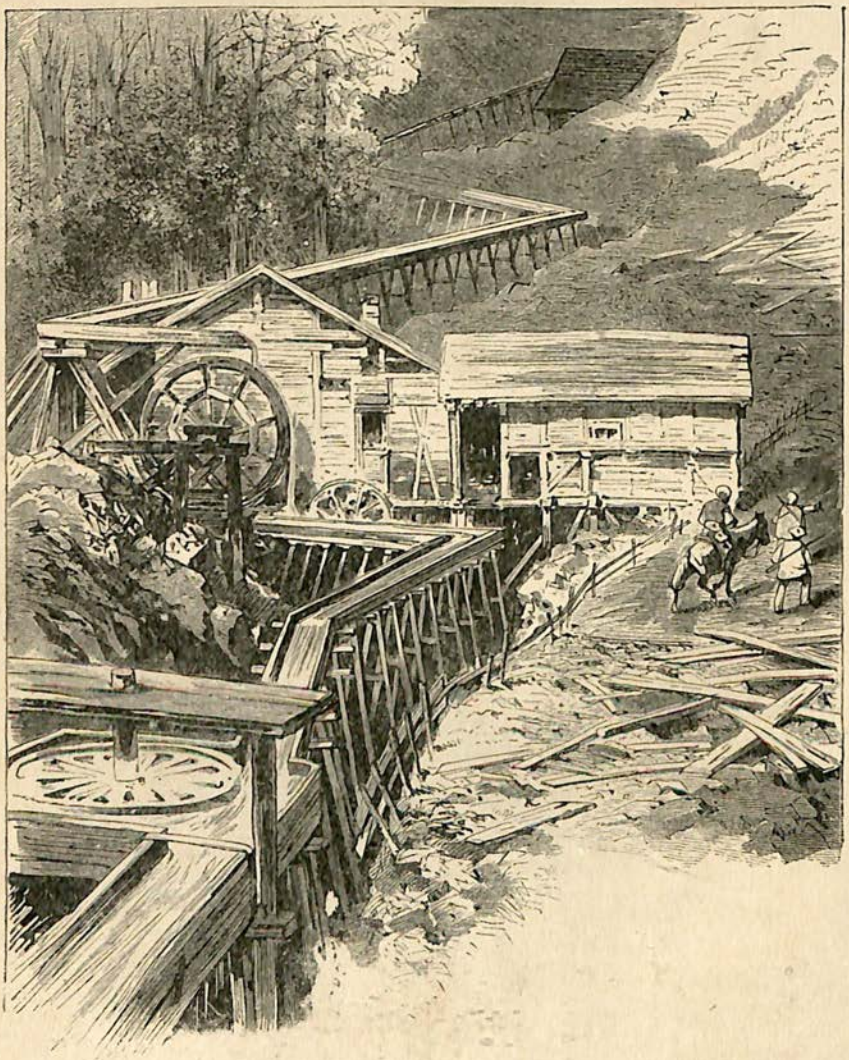
BOTH as regards its climate, its geological formation, and the geographical distribution of its plants and animals, Nicaragua may conveniently be divided into three parallel longitudinal zones. Of these the most easterly, drenched by the warm rains borne from the Caribbean Sea, comprises the primeval forests of the Atlantic seaboard and the interior of the Mosquito Coast; a region still mostly unsettled, where civilisation is only now beginning to penetrate from the west with the extension of the cultivated districts in the province of Segovia, down the course of the River Wanx, and through the opening of the gold-fields in Santo Domingo. The second zone may be said to include the uplands of the central water-parting, on which open savannahs prevail, and embracing the interior provinces of Chontales, Matagalpa, and Segovia. Lastly, the third zone lies between the great lakes of Nicaragua on the east and the Pacific coast on the west. Both in respect of its elevation and the character of its soil, this last is clearly to be distinguished from the other two regions. While these consist of stratified rocks of the oldest formations, crystallised schists, quartz, dolerites, and tolerably old trachytes, in the west there prevail the more recent volcanic tufas and lavas, still being accumulated through the eruptions of the not yet extinct volcanoes. Hence the soil in this western district is unusually fertile, and with

a little attention devoted to its improvement, might be easily converted into a luxuriant tropical garden.

2. *Products—Cattle-Breeding—Exports—Gold Mines of Chontales—Climate.*

To the peculiarities of the land and its vegetation correspond also the products of the three zones. The solitary woodlands of the first yield nothing but indiarubber and mahogany; the second relies principally on cattle-breeding, its grassy plains supplying nutriment to large herds of oxen, horses, and mules; while in the third flourish the fruits and berries of the tropics—coffee, sugar-cane, cocoa, tobacco, and indigo, in profusion. Of these, all, except tobacco, form part of the export trade of the country, in addition to indiarubber from the denser forests, and hides from the pasture-lands of the interior.

The woodland district of the Atlantic slope, although deficient in agricultural produce, is the seat of the gold mines of Chontales, which have been for some years in active working, and have contributed in some degree to augment the resources of the Republic. The mines are situated nearly midway between the Atlantic and Pacific, in lat. 12° 16′ N., and long. 84° 59′ W., and the mining village of Santo Domingo lies about 2000 feet above the sea-level. The surface of the land here forms a succession of ranges and steep valleys, covered with magnificent timber, the valleys being watered by streams which find their way into the Blewfields River, and thence into the Atlantic. The gold is confined almost entirely to auriferous quartz lodes, no alluvial deposits having been found that will pay for the working. The lodes run east and west—the same as the trend of the main hilly ranges; and they lie parallel to each other, in such numbers, that across a band more than a mile in width one may be



GOLD MINE IN HILL COUNTRY OF CHONTALES. *To face page* 123

found every fifty yards. Those that have been worked vary greatly in thickness; sometimes within a hundred yards a lode will thicken out from one to seventeen feet; but their auriferous contents vary still more than their width. The average value of all the ore treated by the Chontales Mining Company, up to the end of 1871, was about seven pennyweights per ton; but patches of ore, of great richness, are occasionally discovered, and these originally led to very exaggerated ideas being formed by English companies as to the value of the mines. Besides Santo Domingo, there are in the same district the mines of San Benito, San Antonio, and Javali, worked by separate companies. The miners are chiefly Mestizoes from the border lands of Honduras and Nicaragua, where they have been accustomed to silver-mining.

The climate of the gold district of Chontales, like that of nearly the whole of the Atlantic slope of Central America, from Belize to Darien, is exceedingly humid. The rains set in in May, and continue, with occasional intermission, until the January of the year following, when the dry season of little more than three months begins. Throughout the year vegetation is never verdant, and mosquitoes and sandflies are rampant in the shady forest. During July and August it sometimes rains for three or four days without intermission.

3. *The Mosquito Coast.*

Our knowledge of the Mosquito Coast is extremely limited. From Greytown northwards to Cape Gracias a Dios there stretches a low-lying level coast, fringed by a white line of surf, and beyond which there extends an impenetrable forest inland. Farther on, Round Hill, a mountain 660 feet high, approaches so near to the edge of the water that, from a distance, it looks like an island;

while still farther inland there follows a succession of dales and hills, one of these with an elevation of 2800 feet. Off the coast there runs a coral reef, beyond which are unfathomable depths, while between them and the mainland the water grows rapidly shallow.

4. *Blewfields—Indian Tribes.*

In the neighbourhood of Blewfields we pass in succession some five or six fairy-like islets, known by the general local term of cays. Blewfields, at the mouth of the river Blewfields, the principal stream in the country, is the residence of the king, for Mosquitia claims to be a monarchy independent of Nicaragua, and flies a flag of its own. Nicaragua certainly does not admit the pretension, but, on the other hand, has hitherto lacked the power to take formal possession of the land.

The inhabitants of this Mosquito Coast consist of an aggregate of mixed tribes, amongst which the Mosquitoes, properly so called, the Wulwa, Rama, and Smu are indigenous, while the so-called Caribs have migrated hither in more recent times. Altogether they may at present number about 3000 heads.

5. *Greytown—The River San Juan.*

The most important point on the Atlantic coast is the seaport of Greytown, or, as the natives call it, San Juan del Norte, lying at the mouth of the great river San Juan, which flows from the south-eastern extremity of Lake Nicaragua, and for a part of its course forms the frontier line towards Costa Rica, thus offering the most convenient approach by water from the east to the great lake itself. In the rainy season, as reported by Mr. Belt in his *Naturalist in Nicaragua*, the San Juan is a noble river,

and even in the dry months, from March to June, there is sufficient water coming down from the lake to keep open a fine harbour; but, unfortunately for the trade prospects of the outport, a large proportion of the water is carried of by a large branch, called the river Colorado, which leaves the San Juan on the right bank, about twenty miles from the sea, and flows to the south through Costa Rica territory. Much of its force is also dissipated

THE RIVER SAN JUAN.

by the numerous side channels of its delta. Twenty-five years ago the main body of water ran past Greytown; there was then a magnificent port, and large ships sailed up to the town, but for several years past the Colorado Branch has been taking away more and more of the water, and the harbour of Greytown has in consequence silted up. It is now proposed to dredge and keep open a navigable channel through the silt; a work necessarily of great expense.

Greytown is a pretty little well-built town, situated in a perfectly level district, intersected by a number of pools

and lakelets. Although surrounded by swamps, drained only by the porous sandy soil of the coast, its climate is by no means unhealthy for a tropical town, a circumstance due mainly to the regular trade-winds freely blowing over the level country, without hills or hollows to interfere with their movement and encourage the accumulation of miasma.

6. *Fauna and Flora.*

The character of the vegetation along the coast is that of the tropical American forest generally; guyava trees rise above the low brushwood, and a great variety of parasitic plants, orchids, and ferns load the boughs, whilst woody creepers, suspended from above, hang down like the entangled rigging of a ship, and stretch from tree to tree.

The densely-matted branches of the trees offer shelter to green parrots, toucans, with their great bright-coloured bills, and gorgeous tanagers (*Ramphocælus passerinus*), sparrow-like birds of a velvety black, with a large fiery-red spot above the tail. Among the insects, conspicuous are the butterflies, great blue Morphos, and Heliconidæ, and a peculiar species of Longicorn beetle, covered with long black and brown hairs, giving it somewhat the appearance of a caterpillar. The branches of the Rio San Juan delta swarm with alligators, which are seen motionless on the banks watching for their prey. They seize young horses and cattle, and will even venture to attack the full-grown animals themselves, drawing them under the water, and, when drowned, leisurely devouring them. But, in the absence of more substantial fare, they are fain to rest satisfied with flies and such-like small winged insects, attracted by the saliva of their open jaws as they lie basking on the banks of the stream. So, at least, report the natives.

7. *Upper Course of the San Juan and its Tributaries—Castillo.*

The banks of the San Juan are at first low, sedgy, and marshy, intersected by numerous side streams. Higher up the primitive forest appears in great luxuriance. The most remarkable tree in this forest district is a tall palm with dense crown, the space between the slender leaf-stems being filled by tree ferns, creepers, and parasites with bright-coloured blossoms. The first affluent is the Seripiqui, flowing from the Costa Rica hills. It is navigable for canoes a long way up its course, after which the journey must be continued on mules over a rugged mountain range leading to San José, capital of the neighbouring republic. Another somewhat important tributary, also from the Costa Rica domain, is the San Carlos.

At the romantic town of Castillo begin the rapids of the San Juan, their foaming and agitated waters contrasting agreeably with the still, dark woodlands on their banks, while the vivid green of the neighbouring grass-grown hills forms a charming framework to the picture. But the interior of the little town corresponds but little with these delightful surroundings. It contains a solitary, narrow, rough, and filthy street, where the swarms of mosquitoes at sunset are as great a plague as on the banks of the San Juan itself.

8. *The Indiarubber Trade.*

Castillo is a centre of the indiarubber trade. Here gangs of natives are specially equipped, for penetrating into the uninhabited forest lands on the Atlantic coast in search of the much-valued resin. In these regions, however, it is extracted from a very different tree, and is prepared in a very different manner from that adopted on the

banks of the Amazons. In Brazil it is obtained chiefly from the *Hevea brasiliensis*, a species of the Euphorbia family, but in Central America from the *Castilloa elastica*, an Artocarpaceous tree, remarkable for its large leaves. When collected, the rubber is sent in large "bungos," or boats, down to Greytown, where the amount exported in 1867 was valued at £23,000, which in 1871 had already risen to £26,000.

The most deadly enemy of the gum-elastic tree is the *Acrocinus longimanus*, the well-known "harlequin beetle," which deposits its eggs in the incisions made to extract the fluid gum, the larvæ later on boring for themselves great holes right through the stem. But through his blind love of gain, man here, as so often elsewhere, shows himself a still more reckless destroyer, the collectors drawing no distinction between full-grown trees and mere saplings, thereby threatening the species with speedy and total destruction. Here there is no such a thing as forestry regulations, under which young and profitable plantations might be easily formed of this valuable tree, so remarkable for its rapid growth.

9. *San Carlos—Lake Nicaragua.*

At the south-eastern extremity of Lake Nicaragua, and consequently at the outflow of the Rio San Juan, lies the old Spanish fort of San Carlos, formerly a strong bulwark of the land, but now falling into ruins, covered with an exuberant growth of the lovely maidenhair fern (*Adiantum*). The little town itself consists of a solitary street, the houses being mostly mere hovels covered with palm leaves, and with bare earth floors seldom or never swept. The population is a mixture of Indians, Spaniards, and Negroes; the Indian element, however, being in the ascendant.

The view of Lake Nicaragua from San Carlos may be described as imposing rather than beautiful. Towards the north-west its waters extend beyond the horizon, but a little to the left is seen the largest island of the lake, with its two cone-shaped volcanic peaks, Madera and Ometepec, 4922 and 5050 feet respectively above the sea-level. Still farther to the left, in the hazy distance, are visible the cloud-capped hills of Costa Rica, and, somewhat nearer, dark and densely-wooded ranges on the right. Besides Ometepec, the lake is studded with several groups of little islands, serving as retreats for flocks of wild ducks and snow-white herons, while its waters are infested by the rapacious alligator and a species of fresh-water shark.

The lake stands at an elevation of 128 feet above the sea, the lowest pass between its south-western shore and the Pacific lying at a height of 26 feet only above the lake-waters, the distance between the two points being but small, and the highest elevation to be surmounted between the two oceans being only 154 feet. Hence the most favourable conditions seem to be here presented for the construction of an interoceanic canal.

The problem of connecting the Atlantic and Pacific by means of a ship-canal has for many years engaged the attention of statesmen, engineers, and merchants, Various lines were proposed and advocated with partisan ardour, before a proper survey could be carried out to demonstrate their feasibility; but many of these afterwards dropped out of sight, and interest was concentrated for some time on two only of the projects, viz. the most southerly one, connecting the river Atrato with Cupica Bay, and the line across Nicaragua through the great lake. The Government of the United States directed careful surveys to be made by well-equipped expeditions, composed of naval and engineer officers, who presented elaborate reports to Congress of the results of their examination of the dif-

ferent lines; the conclusion at which they arrived being that the Nicaragua route, all the circumstances considered, offered the most advantages. Although much longer, they considered that the construction of a canal here would be far less costly than across the Isthmus of Panamá adjoining the railroad, which scheme had most powerful advocates. From the reports of the United States surveyors the following general conclusions were to be drawn. The Nicaragua line is the only one which passes through a region offering chances of future development. On the shorter lines, farther down the isthmus, the great heat of the climate and the marshy nature of the localities would destroy the lives of the majority of the labourers engaged in the construction of a canal. The Nicaragua route is also the only one which presents in itself sufficient water for a canal constructed with locks, which would be necessary whatever route was adopted, the great lake of Nicaragua lying on the way, and permitting the easy regulation of the water-level. The other proposed lines were thought disadvantageous in many other respects; they run, for the most part, through worthless barren tracts, incapable of improvement, and all of them would require a tunnel varying from eight to twelve miles in length, through the central range of the isthmus. Commander Selfridge, however, who surveyed the different lines across Darien, and between the Atrato and the Pacific, in the years from 1871 to 1874, summed up in favour of the route *vid* the Atrato and Doguado over all its rivals, partly on account of its superior healthiness, and the possession of harbours at either end; but the American government were inclined to adopt the views of Commander Lull, who surveyed the Nicaragua line in 1873, thus reverting to the decision it arrived at in 1850, when the Nicaragua route was first approved, and a treaty entered into with Great Britain for

the neutralisation of the canal. The termini of the proposed canal were to be at Greytown on the Atlantic, and Brito on the Pacific; the harbours of both of which ports would require considerable improvement. No tunnel would be necessary. The cost was estimated at ten million dollars, and the time taken in construction at ten years. Commander Selfridge estimated the cost of a canal *viâ* the Atrato and Doguado at 56,350,000 dollars.

The advocates of the Darien and Panamá routes did not accept the conclusions of the Americans, and a new survey, chiefly under French direction, was instituted.

This work was carried on between the years 1876 and 1879, and resulted in an international conference held at Paris in May 1879, at which the Panamá line was then declared by 74 votes against 8 as the best and most practicable. The particular line was that called the "Limon-Panamá," surveyed by Messrs. Wyse and Reclus, which required neither locks nor tunnels. A company was thereupon organised, with M. de Lesseps as its head, and active operations have been commenced.

10. *City of Granada and its Neighbourhood.*

The most important city in the State is Granada on the north-west shore of the lake, though the official capital is Leon, situated inland, farther to the north-west. Granada, with a population of 15,000, is the chief town of the province of the same name, extending northwards to Lake Leon or Managua, a pendant to the far larger Lake Nicaragua. The city, founded in the year 1522, by Hernandez de Cordova, was entirely burnt to the ground by Walker and his filibustering followers in 1856, but has since been rebuilt, now boasting of spacious streets, crossing each other at right angles, and a large public square. The streets are laid in a peculiar manner, running for distances of fifty paces or so on a dead level, then suddenly rising by

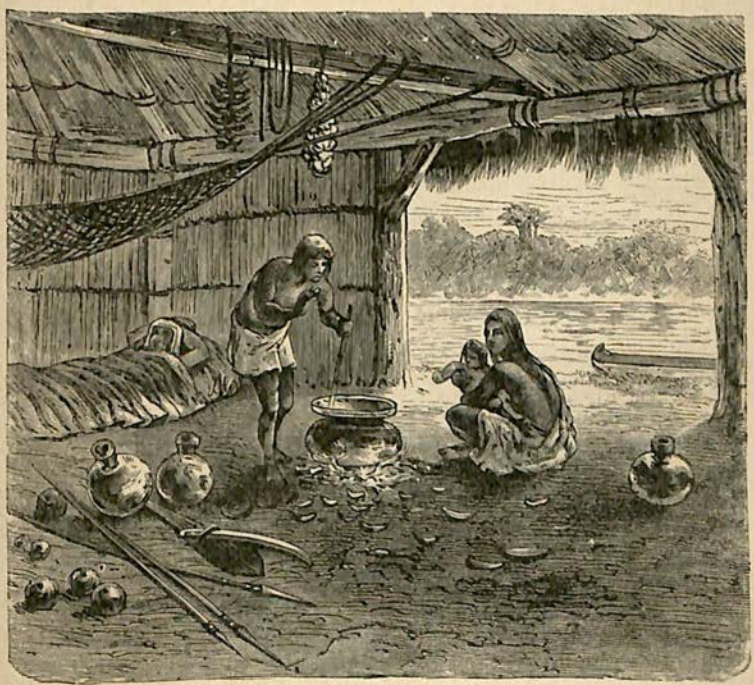
a steep incline to a second level stage, and so on. The houses are built of air-dried bricks, whitewashed, and roofed with tiles. There are also several churches, some of which, however, are in a rather tumble-down state. The place is very lively, and especially famous for one industry, the preparation of the so-called Panama chains, made of gold wire, either compact or hollow, and strung together like our hair chains—masterpieces of the goldsmith's art, unsurpassed even in the ateliers of Paris itself.

Extremely lovely is the country round about Granada, situated as it is within a mile and a half of the shores of Lake Nicaragua, and not many miles from the extinct volcano of Mombacho, towering boldly to a height of 5000 feet, and from foot to summit clothed in a dark mantle of everlasting green. Near the city are numerous and extensive cacao plantations, that bear no mean reputation in the commercial world. The young cacao trees, growing wild in the primeval forests of the Atlantic seaboard, flourish best in the shade afforded them in one place of the banana, in another by the coral tree, a species of Erythrina, on this account called by the natives the "Mother of the Cacao." It grows to a height of 40 feet and upwards, when in bloom at the beginning of April presenting a dense compact mass of bright crimson blossom.

11. *Masaya, its Lake and Volcano.*

Some ten miles west of Granada lies the town of Masaya, with 15,000 inhabitants, of whom nine-tenths are Indians. It covers a great extent of ground, the Indian huts being all surrounded by a garden, and lying off the streets concealed amidst fruit-trees. The ground consists entirely of volcanic tufas, through which all moisture percolates, so that springs or brooks are no-

where to be found. Hence, as Mr. Belt informs us, Masaya draws its whole water supply from a lakelet 330 feet below the town on its western side. This lakelet seemingly fills the mouth of an extinct crater, steep rocky walls enclosing it on all sides with blackish cliffs at their feet, here



INDIAN HUT, MASAYA.

and there profusely overgrown with the maidenhair fern. All the surroundings of the "Hell of Masaya," as the lake is called, are of volcanic origin, its western side being flanked by the cone-shaped and destructive volcano of Masaya, whose lava-streams, flowing down, have covered the sides of the old crater and formed an oblique incline to the banks of the lake.

12. *The Marabios—The Devils' Dance.*

With this volcano are connected the Marabios, a group of hills where are probably concentrated more volcanoes than in any other spot on the globe. The best view of the Marabios is presented from the wide plain of Leon, from which as many as fourteen volcanoes may be counted within a distance of about 70 miles. Here are lava fields, by the natives called *Malpais*, or barren land, extending in places for miles in all directions. During the day we become aware of a glistening movement of the atmosphere on the heated surface of these fields, while at night the whole district is lit up by a bluish alcoholic-like flame, at times flashing across the land, at others leaping up like a column of fire and then mysteriously disappearing. The natives call this phenomenon *el baile de los demonios*, or, the devils' dance.

13. *Politics—Social Obstacles to Progress.*

In its political condition Nicaragua presents the same picture as the rest of the Spanish American Republics: nothing but party feeling and factiousness, without a trace of public spirit anywhere. The party for the time being at the helm makes its personal influence felt in all branches of justice and the executive, thrusts its partisans into all the more important offices of state, and especially at the elections brings into play an oppressive force overriding all opposition. Hence a change of government is impracticable except by a revolution; and with all the specious parade of freedom, and in spite of the full play of republican institutions, the true will of the majority can find no expression that is not the result of intestine warfare. The opinion would accordingly seem fully justified that Nicaragua can advance only by very slow strides towards a more promising future.

The obstacle to the full development of its vast natural resources lies not so much in any difficulties connected with the cultivation of the land, as in the very exuberance with which Nature has here lavished her gifts on man. As soon as he discovers that he can live at ease with a minimum of labour, man is ever prone to shirk all vigorous action, and to continually retrench all superfluous wants or luxuries, in order to have the greater leisure for leading a life of idleness. And should he himself resist this temptation, his posterity will all the more inevitably yield to it. This grievous impediment to the progress of civilisation might be perhaps to some extent balanced by a large accession of immigrants, developing a spirit of competition on the one hand, and on the other maintaining a higher standard of social culture, with all its accompanying wants, such as can be supplied by work alone. But even then it would be necessary to guard carefully against the bad example of the few "ne'er-do-weels," whose aversion to hard work might else soon find but too many imitators.

CHAPTER XIII.

COSTA RICA.

1. *Volcanic System.*

THE territory of Costa Rica consists of a table-land, rising from the maritime districts in terraces to an elevation of 4300 feet, over which tower numerous volcanoes, some of which attain a height of 11,500 feet. Their actual number has not yet been ascertained, the country itself being still far from thoroughly explored. This is especially true of the hitherto utterly inaccessible Montaña de Dota, or Dota range, situated in the very heart of the republic. Nor is it so many years since Professor William M. Gabb of Philadelphia was able to discover two previously entirely unknown volcanoes, over 8000 feet high, lying in the main range of the Cordilleras, due northwest of the Pico Blanco.

However, the most important volcano in Costa Rica would seem to be the Turrialba (11,350 feet), which was in violent action in 1871, and is the southernmost of the active burning mountains in Central America, and the near neighbour of Mt. Irazu scaled by Von Scherzer and Von Frantzius. As might be expected from the volcanic nature of the land, there is a whole series of hot mineral springs associated with the volcanoes.

The general character of the interior is that of an Alpine region, traversed by sharp and steep ridges, and furrowed by mountain torrents. In many wide districts an impenetrable and nearly uninhabited virgin forest

covers the surface of the land. Only a twentieth part of the area of the republic is under cultivation.

2. *Rivers—Soil—Products.*

The rivers have necessarily but a short course, the most considerable being the Rio Escuda, the Rio Tilirl, and the southern arm of the San Juan del Norte. The soil, especially on the coast, is very fertile, including extensive savannahs, besides magnificent forest lands. The climate is naturally hot, though, of course, more temperate in the uplands, where the chief part of the population is concentrated.

The principal products of the country are nearly the same as in the neighbouring states—tobacco, sugar cane, coffee, indigo, cocoa, and Indian corn. Coffee, however, is the staple of trade, and the chief article of export; so much so that Costa Rica is sometimes called the Coffee Republic; 11,500 tons were exported in 1875. It is significant for the movements of commerce that a portion of its coffee crop has already found its way to California. Cattle-breeding is also in a flourishing state, while mining yields considerable returns.

3. *Mineral Wealth—Gold Mines.*

Nevertheless, Costa Rica had always been a poverty-stricken country, until the declaration of independence in 1821. The name of Costa Rica, or "rich coast," was given to it by the Spaniards, not on account of the wealth actually found there, but of the wealth they hoped to find there. Nor was it till some time after the discovery of the gold-mines of Agucate, in 1823, that the resources of the land began to be developed. Since then its mineral wealth has been continually increasing in importance, and attracting the foreign capital needed to open up the mining districts. This was especially the case when the gold-

mines of Paires were found in 1857, followed by the discovery of the still more productive mines of Ciruelitas in 1864. We are assured by Dr. H. Polakowsky, one of the most recent travellers in Central America, that Costa Rica may now be considered as decidedly the richest of the five Central States; and, what is more to the point, inhabited by the most industrious and cultured population in this division of the New World.

4. *Population—Native and White Elements—Prosperous State of the Country.*

Unfortunately this beautiful and extremely fruitful land is still very thinly peopled, the latest statistical returns (1875) giving a total population of no more than 185,000, almost exclusively centred on the elevated plains between the two towns of Alajuela and Cartago. Hence this district appears not only thickly peopled, but also highly cultivated, and is further provided with a railway in active operation. It is computed that not less than seven-eighths of the population of the country is contained in this central district.

The natives of Costa Rica are distinguished above all the Central American peoples for their fair complexion. The Indian has been largely supplanted by the white element; the great majority of the inhabitants betraying, on careful examination, but very faint traces of native American blood. An amiable courteousness and obliging disposition, even towards strangers, advantageously distinguishes the Costa Rica people, and especially those of lower rank, from the natives of Guatemala. The country at least fully justifies its title of "The Rich Coast," the symptoms of wealth and comfort being everywhere apparent, and the mendicants, elsewhere so troublesome to strangers, being here conspicuous by their absence. The photographs of two or three old beggars, as a late traveller records, are even hawked about as rare curiosities.

This prosperous state of things is partly explained by the fact that all the inhabitants possess at least a small piece of land, which, owing to the astonishing fertility of the soil, and the care devoted to its tillage, yields comparatively handsome returns. The men of the working classes here also show to advantage, above those of the other Central American States, by the wisdom they display in abstaining from meddling with politics, occupying themselves rather with their cattle and their coffee plantations. The political arena is frequented in Costa Rica only by the so-called educated classes, "the men of culture," who mostly despise agricultural and such like pursuits.

5. *The Immigration Question.*

A vital question for Costa Rica, no less than for most other tropical American lands, is that of colonisation. The native element is here scarcely sufficient for the requirements of the coffee haciendas, to say nothing of such more serious undertakings as the projected railway, which is intended to cross the country and bind ocean to ocean. This line, starting from Puerto Limon on the Atlantic seaboard, will, when finished, pass over the Cordilleras and the table-land, uniting the two chief towns of Cartago and San José, and terminating at the Port of Calderas on the Gulf of Nicoya in the Pacific. The first portion of the line, between Alajuela and Cartago, 42 miles long, was opened to traffic in March 1873. The difficulties to be surmounted are undoubtedly very great, and the necessary hands, which the country itself cannot supply, must be brought, in the first instance, from Cartagena and Jamaica. Financial difficulties also stand in the way, the Republic having incurred a debt of no less than £3,400,000 sterling, on which no interest has been paid since 1872. Costa Rica has hitherto refrained from introducing the African element, although here, as elsewhere, Negroes, Mulattoes, and Zamboes alone

can be advantageously employed in the low-lying hot regions. After many years' experience it is universally admitted that neither Germans nor Irish are at all suited for working colonists in tropical America, being soon either stricken down by disease, or else becoming as indolent as the natives. The last colonisation experiment in Venezuela, which cost the State some 200,000 dollars, ended no better than did the Tyrolese settlement on the Pozuzu in Peru, or the attempt made in Guatemala to establish a Belgian colony at the magnificent harbour of St. Thomas. The endeavours of Von Bülow and Medina to found German settlements in Costa Rica had similar disastrous results; while the North American and German immigrants in Chiriqui, to the south of Costa Rica, again withdrew from the country as soon as the gold in the old Indian mines was exhausted.

6. *The Dark Side of the Picture.*

However favourable the general picture presented by Costa Rica, when contrasted with the neighbouring States, there is still a dark side to the picture itself. So recently as the year 1872, the minister of justice is obliged to comment on the general depravity in such terms as these:—"We have reached such a degree of corruption as to be compelled for the sake of our honour to conceal the statistics of crime amongst the population, else we should lose the good repute we have hitherto been held in amongst strangers." As the causes of this state of morality he specifies defective instruction, the prospects of impunity owing to the tardy and inefficient administration of justice, confidence in the chances of escape from confinement in consequence of the bad condition of the houses of detention, a want of an efficient police, possessed of the skill and experience required for the detection of criminals, and several others.

WEST INDIES
AND
CENTRAL AMERICA
Scale of Statute Miles
Bartholomew's Edinburgh Geographical Institute
GULF OF MEXICO
CARIBBEAN SEA
PACIFIC OCEAN
ATLANTIC OCEAN
Caicos Bank
Great Bahama Bank
Florida Reefs
Florida Keys
Tortugas
Cape Sable
Cape Florida
Cape Canaveral
Cape Romain
Charleston
Savannah R.
Mississippi R.
Mobile
Pensacola
Apalachicola
Tampa B.
St. Augustine
Indian R.
Matanzas
Havana
Cape St. Antonio
Isle of Pines
Cape Corrientes
Cape San Antonio
Yucatan
Campeachy
Campeachy B.
Laguna de Terminos
Alvarado R.
Tuspan
Tampico
Vera Cruz
Sacrificios I.
Rio Grande
Rio Panuco
Rio Tabasco
Rio Grijalva
Rio Usumacinta
Rio Chixoy
Rio Motagua
Rio Dulce
Golfo Dulce
Gulf of Chiriqui
Gulf of Guacanaste
Gulf of Nicoya
Gulf of Fonseca
Gulf of Amatique
Bay of Honduras
Bay Islands
Roatan
Guanaja
Utila
Swan Islands
Cape Gracias a Dios
Blewfields B.
Blewfields R.
Escondido R.
Rio San Juan
Lake Nicaragua
Lake Managua
Lake Leon
Lake Nicaragua
Lake Chiriqui
Lake Izabal
Lake Peten
Lake Atitlan
Lake Amatitlan
Lake Guija
Lake Ilopango
Lake Guija
Lake Yojoa
Lake Alvarado
Lake Terminos
Lake Pontchartrain
Lake Maracaibo
Lake Valencia
Lake Tacarigua
Lake Guatavita
Lake Titicaca
Lake Poopo
Lake Aricota
Lake Umayo

THE WEST INDIA ISLANDS.

CHAPTER I.

GENERAL DESCRIPTION OF THE WEST INDIES.

1. *The Great and Lesser Antilles—Windward and Leeward Groups.*

By the expression West Indies is understood the large group of islands lying east of Central and north of South America, and so disposed as to form a rough line of demarcation between the Atlantic Ocean and the Caribbean Sea, and Gulf of Mexico. These islands, which vary greatly in size and geological formation, are usually divided into several minor groups. Of these the northernmost are the Bahamas or Lucayas—a long archipelago of low islands of calcareous formation, lying in somewhat shallow water off the Great Bahama Bank. South-west of them stretches the vast island of Cuba, in an almost due east and west direction, the most important of the whole group, as well as the principal member of the great Antilles, a group which, besides Cuba, comprises Jamaica, Hayti, Porto Rico, and several smaller islands.

East of Porto Rico begin the Lesser Antilles, also known as the Caribbee Islands, by navigators again subdivided into the two groups of the Windward and the Leeward Islands, so called in accordance with the direction in which they lie with regard to the prevailing easterly trade wind. The former stretch, in a bold curve, 600

miles in length, from Porto Rico to the South American coast, where Trinidad, the most important amongst them, shuts off the Gulf of Paria, in Venezuela. The latter or Leeward group stretches to the west of the Windward, parallel with the South American coast, as far as the Gulf of Maracaibo, and near the shores of Venezuela.

With a single important exception all these islands belong to European nations, being shared among the British, the Dutch, Sweden, Denmark, France, and Spain. The solitary exception is Hayti, which is divided into two independent native states. Some few also of the Leeward group belong to the South American Republic of Venezuela.

2. *Geological Features of the West Indies.*

The West Indian Archipelago lies in deep waters, the Caribbean Sea being a volcanic basin, with a mean depth of about 1500 fathoms, and the outermost islands, north, south, and west, being separated from the continent by deep channels. The sea in which the islands are situated is famous both for its transparency, and for the many dangers to which navigation is exposed amidst such a number of islands, rocks, and shoals, and where violent hurricanes are so frequent. The Antilles, although forming, as it were, a sort of causeway between the northern and southern continents, belong to that class of islands that have been for a long geological epoch isolated from the mainland. Hence their fauna and flora, although belonging to American types, differ in species and often in genera from the neighbouring continental lands. Trinidad, Tobago, and the islands along the coast of Venezuela form exceptions to the rest, belonging in geological structure and their fauna and flora to the South American continent, from which they are separated only by narrow

tracts of shallow water. The first Spanish discoverers found in the Islands only four or five small species of land Mammalians. Cuba and Hayti are spacious enough to have offered a home to a number of large quadrupeds similar to those of the neighbouring continents, had these islands been connected with the mainland at the time when those animals made their appearance on the earth. Hence we may conclude that the West Indies scarcely belong to the class of continental islands, like, for instance, Great Britain, and Sumatra, Java, and Borneo, with regard to the continents respectively of Europe and Asia.

With the exception of the Bahamas and of the eastern chain of the Lesser Antilles, consisting of low and level limestone rocks, all the islands are mountainous. In the Great Antilles, as well as in Tobago and Trinidad, there are extensive grass-grown plains or savannahs, but the general character of the land in all is that of richly-wooded mountain slopes and valleys. The western chain of the Windward Islands are of volcanic formation. The ocean currents have caused their eastern shores to become covered with sand, flat and provided with shallow harbours enclosed by coral reefs. Their west coasts, on the contrary, are steep and rugged, with innumerable bights forming deep and otherwise excellent harbours.

The Leeward Islands are hilly but not volcanic, the elevations being the fragments of a mountain range running parallel with the Venezuelan coast range; the high ridges of Trinidad being an eastern continuation of the coast range itself. The larger islands are well supplied with water, while many of the smaller ones are unprovided with springs.

3. *Climate—Distribution of Temperature.*

With the exception of the northerly portion of the

Bahamas, mere tracts of coral limestone, scarcely elevated above the sea, and mostly uninhabited, the West Indian Archipelago lies within the torrid zone, between the isothermals of 77° and 82° Fahr. But the uniform tropical heat is here tempered by the long cool nights, the sea breezes, and on many of the islands by the height of the hills. In the coast districts of the northern islands, and especially in Cuba, after a long prevalence of northern winds in winter the thermometer will at times fall to the freezing point, when ice is formed, though snow never falls. The hilly districts of the larger Antilles enjoy a mild climate, which in regions above 1500 feet is both healthy and enjoyable. The lowlands are, however, decidedly unhealthy, and mostly exposed to yellow fever, here epidemic. There are two seasons only—the rainy period from May to November, and the dry season lasting for the rest of the year.

4. *The West Indian Hurricanes.*

Amongst the scourges common to all the islands are the violent cyclonic storms, or hurricanes, which occur most frequently in the season from August to October, and which are distinguished from ordinary storms by the wind blowing with the utmost violence successively from all points of the compass, uprooting the strongest trees, and at times destroying whole cities. On August 2, 1837, some houses in St. Thomas, one of the Windward Islands, were actually turned completely upside down by one of these destructive storms. A large well-built house was on the same occasion torn from its foundations, and planted upright in the middle of the street. The fort at the entrance of the harbour was utterly demolished, and its 24-pounders flung headlong down to sea. On July 25, 1825, a whirlwind burst over Guadeloupe, another of

the Lesser Antilles, with such force, that many strongly constructed houses were dashed to the ground, and tiles from the roofs were hurled through thick doors into the warehouses.

On such occasions the sea is often lashed to a state of the wildest frenzy. The waves, upheaved by individual blasts of wind from opposite directions, rush madly against each other, the violence of the collison causing the billows to be piled up mountain high, sending thick volumes of foam far above the tallest masts; the sea heaves and tosses as in a seething caldron, and the white-crested breakers cover the bosom of the deep far and wide. The strongest vessels run imminent danger in the raging struggle of the tumultuous waters—now suspended in mid air on the tops of the strong waves, now disappearing in the yawning trough of the sea. A sure forerunner of these natural convulsions in the tropics is the rapid depression of the barometer.

The cause of cyclones and of the kindred typhoons of the eastern seas is the sudden rising of the heated and rarefied air. Over the warm waters of the tropics where they are bred, a slight disturbance of the equilibrium of the atmosphere may easily arise, influencing a vast extent of surface, and causing the warm air charged with moisture to ascend in broad columns to the higher and cooler regions above. The vapour thus borne aloft, while condensing into clouds, imparts its heat to these upper currents, thereby producing a farther upward tendency. Under the ascending columns the atmospheric pressure is necessarily diminished, and so arises the rarefied centre or vortex of the cyclone, the in-rushing air rotating with intense rapidity round this central point, which does not remain stationary, but receives a progressive motion varying considerably in velocity. For the West Indian hurricanes the average speed is from $15\frac{1}{2}$ to 22, but in

higher latitudes from 28 to 34, and often even 50 miles an hour. But the motion of the air round the centre not being perfectly circular, but rather with a perceptible centripetal tendency, the atmosphere rotates inwards, gradually approaching the vortex of the whirlwind. In the northern hemisphere the circular motion is from south by east to north and west, but in the southern from south by west to north and east; the axis itself, and consequently the whole storm, being carried forward north of the equator from S.W. to N.E., but south of the equator exactly in the opposite direction. From the direction of the gyrating wind arises the obvious rule laid down by Buys-Ballot, that *when we turn our back to the wind in a cyclone the vortex will be on our left in the northern, and on our right in the southern hemisphere,* with in both cases a slight inclination to the front. The force of the wind within a tornado increases from without inwards, while within the vortex itself there prevails either a slight and irregular current only, or else that awful calm known as "the lull of the storm." The cyclones originate in the torrid zone, but they frequently enough travel as far as Western Europe, Atlantic storms being generally mere continuations of West Indian hurricanes.

5. *Products of the Vegetable, Animal, and Mineral Kingdoms.*

The most important productions of the West Indies belong to the vegetable kingdom. Here flourish the sugar-cane and coffee-berry of excellent quality, besides the cotton-tree, the cacao plant, and tobacco. The Antilles are a great centre of plantations devoted to the cultivation of these products, while the principal wealth of the Bahamas consists in mahogany, Campeachy wood, and timber suited for shipbuilding. Through the clearance of the forests

and impoverishment of the land the productiveness of some of the islands has no doubt diminished; yet, besides the above-mentioned commodities, the West Indies still produce pimento (Jamaica pepper, or allspice), vanilla, indigo,

WEST INDIAN PRODUCTS.

ginger, cloves, cassia, jalap, aloes, arrowroot, ipecacuanha, sarsaparilla, tropical fruits such as bananas and pine apples, besides yams, batatas (sweet potatoes), manioc (or manihot, whence cassava and tapioca are prepared), rice, various European grains, bread fruit, and coco-nuts.

The indigenous animals of the islands are not so

numerous as in districts of equal area in similar latitudes on the neighbouring continent, and the majority of them are quite distinct in species, showing, as we have already observed, that the Antilles have not been connected with the mainland either of North or South America during the existence of the present forms of life. Almost all the orders most characteristic of South and Central America are absent. There are no monkeys, no jaguars, pumas, tiger-cats, wild dogs, or foxes, and no Edentata (sloths, ant-eaters, and armadillos). A species of agouti, found in St. Vincent, St. Lucia, and Granada, is the largest native mammal. Besides these there exist only bats, two species of insectivora totally unlike anything found in North and South America, and a few species of rodents. Of birds 203 distinct kinds are recorded, of which 177 are peculiar to the islands; but in general character they are allied to tropical American forms, and comprise humming-birds, parrots, trogons, tanagers, and chatterers. Snakes are moderately numerous, and lizards are abundant and in great variety. Amongst the former is the much-dreaded poisonous serpent, the "*fer de lance*," abundant in the islands of St. Lucia and Martinique; and a large harmless snake called the "Cribo" (*Coluber variabilis*), which often attacks the fer de lance, and in spite of his venom kills and eats him. The iguana is found in the larger islands, and, as in South America, is eaten by the poorer inhabitants. Tree-frogs are also abundant, but there is no representative of the newt and salamander tribe—*i.e.* tailed Batrachians—of which so many kinds are found in the not far distant Southern States of America. On the coasts turtles and many varieties of fish abound. The islands have become well stocked with European domestic animals, and even with rats and mice, to which latter may possibly be due the extermination of some of the smaller indigenous

quadrupeds. Deer and guinea-fowl abound on the island of Barbuda, where they were introduced some years ago, and are now hunted as wild game.

Of metals copper ore alone is found in Cuba, and elsewhere coal, sulphur, and asphalte. Most of the sea-salt used is prepared in the Bahamas and in Martinique.

6. *Population—Indian, Negro, and White Elements—Trade.*

The aboriginal inhabitants of the West Indies have almost entirely disappeared. These islands were originally peopled by a great variety of Indian tribes—the gentle, submissive, homely, and trusting Cibaneys or Ciboneys in the Bahamas and Cuba, with tribes speaking kindred dialects in the Greater Antilles, and the warlike, savage, but intelligent Caribs (wrongly Caraibs) more to the south—skilful mariners, and the terror of their neighbours. Both races have vanished before the advance of the white man, these regions being now peopled by foreign intruders—Europeans, imported Negroes, and a mixture of the two. These adverse circumstances are intensified by the fact that the Africans form fully 56, the half-castes 27, and the whites 17 per cent only of the entire population, which may be estimated at about 3,600,000, very irregularly distributed over the islands. On the smaller islands the inhabitants are partly centred in a few seaports, partly scattered over the plantations throughout the rural districts.

Both the Catholic and the Protestant forms of Christianity are represented, while many heathen practices still prevail among the Negroes.

The cultivation of the plantations is the principal pursuit of the people, the whites being the chief owners of the soil. To them belong the plantations in the most

absolute sense, including the house of the planter, the buildings on the estate, and the hovels of the Negroes. The Africans were originally introduced as labourers, it having become evident, soon after the discovery of the islands, that little use could be made of the aboriginal inhabitants, and that Europeans in these tropical latitudes were utterly incapable of the physical endurance required for the cultivation of the colonial products, as they are called. Hence the Negroes were at first imported as slaves, but since the abolition of slavery they have acquired the rights of free citizens in most of the colonies. In the islands belonging to Great Britain the large sum of £20,000,000 was voted by the Imperial Parliament as compensation for the liberation of the slaves. But this great act of philanthropy and justice was accomplished without the adoption of measures to secure a gradual passage from the state of slavery to that of freedom, and the interests of the British colonies was afterwards damaged by the equalisation of the duties on slave and free-grown sugar imported into Great Britain; thus placing the newly-enfranchised islands at a disadvantage in the competition with the slave-owning Spanish islands. These measures to a large extent sealed the ruin of these rich lands, the free Negro here showing the same inherent aversion to labour as elsewhere. Hence, to prevent the plantations from running wild, it has been found necessary to introduce Coolie labour from the East Indies and China. Many thousands of these have been imported at a great expense, but they have scarcely answered the purpose of those who established the system, the immigrants often preferring employment as handicraftsmen or as domestic servants to the more monotonous labour of the plantation. By the terms of the contract the Coolies have a right to be sent back to their native land on the expiration of their terms of indenture, but, in Jamaica at

least, more than half of them accept the bounty of £10 or £12, and consent to remain in the island.

The industry of the people is everywhere limited to such branches as are more directly connected with the plantations and navigation. The more urgent wants of the community are supplied by the local crafts, while manufactured wares are introduced from Europe. There is a brisk trade carried on, not only with the home countries, but also with many other regions and commercial marts.

CHAPTER II.

THE GREAT ANTILLES.

1. *Cuba: Extent—Mountain Ranges—Coast Line.*

CUBA, the pearl, or, as the Spaniards are equally fond of calling it, the Queen of the Antilles, and pronounced by Columbus to be the fairest land the eye had ever gazed on, is in truth one of the most favoured countries in the world, both as regards its charming scenery and its abundant natural resources. It has a superficial area of about 43,000 square miles, in outline resembling a cornucopia, with its mouth turned towards Hayti, and stretching for a distance of 800 miles eastwards from the Central American peninsula of Yucatan, from which it is separated by a channel about 124 miles wide, and 1160 fathoms deep. At its broadest or eastern extremity there rises between Cape Cruz and the bay of Guantanamo the Macaca range, or Sierra Maestra, with a crest 4000 feet high, above which, however, other individual hills tower still higher. Thus the Turquino peak, visible far out at sea, reaches an elevation of 8400 feet, and the Gran Piedra 7200 feet, the former being the loftiest mountain in the island.

From the Sierra Maestra westwards to the gulf of Guacanayabo flows the Rio Cauto, the longest and deepest of the 150 streams which the island contains; it has a course 250 miles long, and is navigable for large schooners as far as the town of Cauto del Embarcadero, 93 miles from its mouth.

PROMENADE IN CUBA.

To face page 152.

Contrasting with the highlands and their lofty peaks in the east, and the perfectly level plains which occupy the south-western part of the island, are the deeply undulating regions of the centre, throwing off isolated ridges of moderate elevation. The hilly districts are extremely picturesque, in many places marvellously beautiful.

Cuba is also especially noted for the number of splendid bays and harbours it contains. That of Havana was long regarded as the finest haven in the world, and yet it is surpassed by the bays of Cienfuegos on the west coast, Santiago and Guantanamo on the south, Matanzas, Nuevitas, and Nepe on the north. The seaboard is nearly encircled by a countless number of coral reefs, rocks, shoals, sandbanks, and smaller islands, some of which, such as the Laberinto de doze Leguas on the south, form a perfect maze exceptionally favourable for smuggling.

2. *Climate—Highways—Railroads.*

By far the greater part of the uncultivated land is covered with forests, consisting mainly of scrubby and almost impenetrable thickets. But on the hills in the south-eastern districts are lofty forests of mahogany and ebony trees, often attaining gigantic dimensions.

The most agreeable season is that of winter, as it is called, though bringing with it neither snow nor ice. In fact, strictly speaking, there is but one season, a perpetual summer, the hottest months being August and September, when the temperature is so high that the glowing pavement of the streets scorches the pedestrians' "shoe-leather." In the lovely uplands of the south alone is the summer heat tempered by a pleasant breeze, while in the low-lying districts the yellow fever, so fatal, especially to strangers, claims its yearly percentage of victims.

Highways, such as are usually met with in civilised

lands, are not to be found even in the neighbourhood of the capital itself. The so-called roads are mere tracks, marked by ruts and puddles, and in the interior further overgrown with brakes and brambles, so that the traveller is often fain to hew himself a way with the axe. On the other hand, Cuba has already developed a tolerably extensive railway system, with a total length of 1150 miles, of which Havana is the central point. Nowhere else have the lines been so cheaply constructed. The earlier and more costly ones were no dearer than those of the United States, while the rest were laid at a much lower rate, the planters, fully alive to their real interests, having waived all "compensation claims" for the land through which the lines were constructed. Especially important is the main railway to Matanzas, connecting the two chief seaports in the island, though the branches along the south coast contribute, perhaps, still more to the development of its resources. For, however enchanting the picture drawn of this region, and particularly of the Jardines del Rey y de la Reyna, the south coast is deficient in good harbours, and its waters are rendered extremely dangerous by the numerous coral reefs on this side of the island. A submarine cable to Florida connects its telegraphic system with that of the United States and the Old World.

3. *Political Divisions of Cuba.*

Cuba has hitherto belonged to the crown of Spain, the recent prolonged revolt aiming at its political independence having not yet proved successful. It is divided into three departments: the western, with the capital, Havana; the central, with Puerto Principe for its chief town; and the eastern, whose capital is Santiago de Cuba. The first and smallest, consisting mostly of level plains, is nearly all cultivated, containing the great sugar and

tobacco plantations that constitute the main wealth of the land. This section of the island is also the most densely peopled, the richest and most civilised, possessing good means of communication and a considerable line of coast. In the central department nearly the whole of the

GARDENS OF CUBA.

population is centred in the towns, the land being almost unpeopled, and covered with dense bushy forests and savannahs. The few cultivated tracts have been devastated by the insurrection. In the eastern department, including the earliest settlements, the valleys have been

successfully reclaimed up to a certain elevation, and the hills laid out with valuable coffee plantations. But here, also, the interior is mostly uncultivated and uninhabited.

4. *Staples of Trade—The Sugar Plantations—Cigar Manufactories—Coffee.*

Of the total area of Cuba, not more than about one-tenth—4000 to 4300 square miles—is really cultivated. Upwards of 3000 square miles are still entirely unreclaimed, 2000 covered with forests, and wide tracts in the interior are still utterly unknown. The principal plantations are those of the sugar-cane, tobacco, and coffee, the first being by far the most important, with a present annual yield of 800,000 tons, well nigh one-fifth of the sugar required for the consumption of the whole world. The yearly export of sugar is valued at from £12,000,000 to £16,000,000, of which 75 per cent goes to the United States, 13 per cent to England, and not quite 2 per cent to Spain. There are said to be as many as 1500 sugar plantations, or *ingenios*, as they are called, in Cuba, of which 1200 yield in "dry sugar," that is, without taking molasses into account, only 4 per cent, and the rest from 6 to 9 per cent on the invested capital.

The "vegas," or tobacco plantations, are principally in the Vuelta Abajo in the west, south of the Guaniguanico range, the best of them lying in an extensive level plain watered by the river Cuyaguatejo. They are generally small, and about half of them are planted with banana trees, affording shade to the tobacco plant. The upper leaves of the plant are the best, because they have by day the most sun, and at night the most dew. The finest tobacco is of a uniform dark brown colour, free from spots, and burning freely with a brown or white ash, which will adhere to the cigar till it is half consumed. Though of

but secondary importance in the trade of the island, the annual crop of tobacco in Cuba is valued at over £4,000,000. The cigar is an original invention of the aborigines of this island, and was by them called *tabacos*, a word afterwards erroneously applied to the plant itself, the true name of which is cohiba. Hence the expression "fabrica de tabacos" on the Havana cigar boxes really means, not "tobacco manufactory," but "cigar manufactory." In Havana itself there are some 125 of these manufactories, some of them employing as many as 600 hands. Those of Partagas, del Valle (Cabañas), Murias, and next to them Caruncho, Romero, Suarez (Figaro), Upman, and Cabarga, produce the best cigars. In 1866 there were manufactured of Cabañas alone as many as 16,000,000, of which 2,500,000 remained in Cuba, the same quantity was exported to Spain, 1,000,000 to France, 2,000,000 to Spanish America, the same to Germany, and 3,000,000 each to England and the United States.

The "cafetelas," or coffee plantations, were formerly the most considerable culture in Cuba, but they have long been almost everywhere superseded by those of the sugar-cane. The largest of those still remaining do not employ more than from 50 to 100 Negroes. On these plantations, besides coffee, there are also grown pisang, rice, cacao, and all manner of fruits, but especially the coco-nut palm, on account of the shade it affords to the coffee plant.

Cattle-breeding is also carried on to some extent in Cuba, and the horses especially are often very fine animals. Other products are potatoes, sometimes growing to a very large size, wax, and honey, the latter exported in considerable quantities.

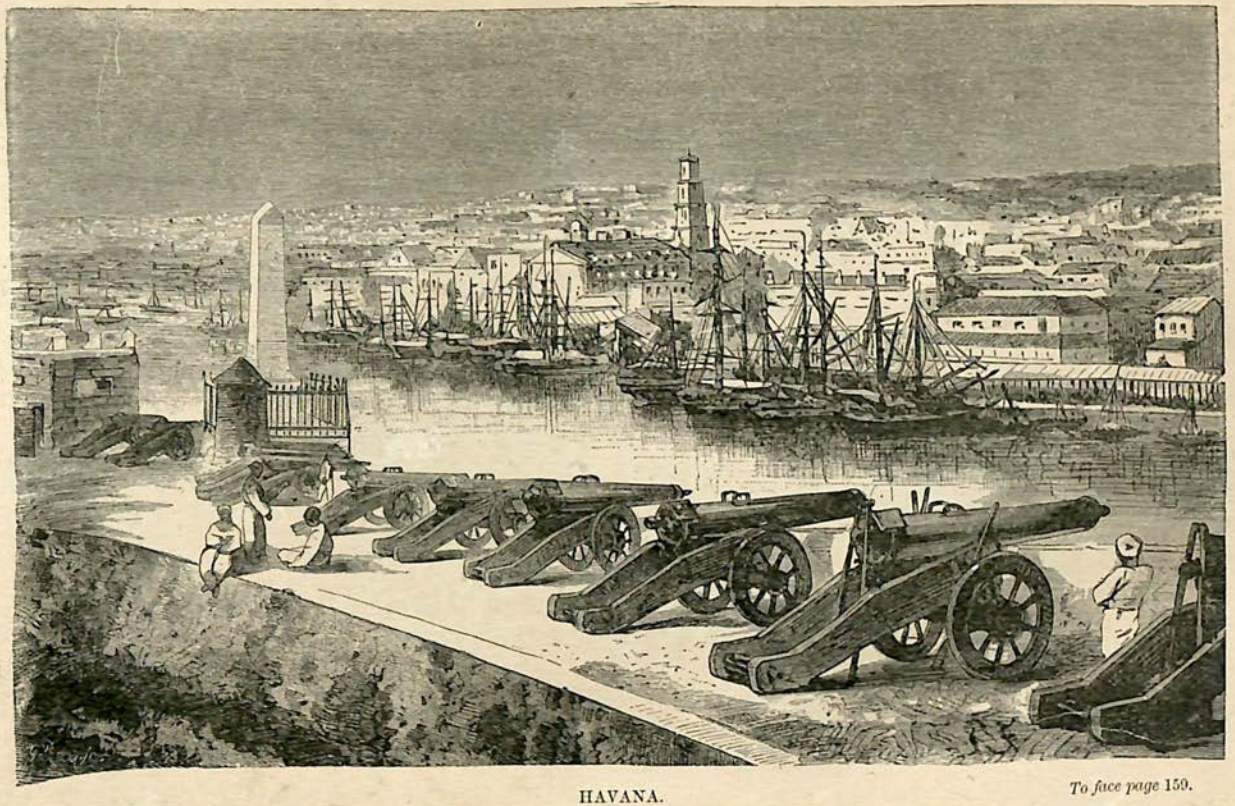
5. *Population of Cuba: Spaniards—Creoles—Negroes and Coolies.*

The population of Cuba is estimated at about

1,500,000, of whom 800,000 are set down as whites, including the "Yucatekes," half-caste Mexicans from the opposite shores of Yucatan, and the Chinese Coolies, also

CHINESE COOLIES OF CUBA.

reckoned in with the whites. About 150,000 are Spaniards by birth, including the military and the Government officials, the latter residing exclusively in the capital and the other large towns. Some 600,000 are Cubans or Creoles, mostly of Spanish descent. The number of



HAVANA.

To face page 159.

Negroes and coloured half-castes is given at upwards of 600,000, of whom 270,000 are slaves, Spain being now the only European State which permits the existence of slavery in its colonies. Of the aboriginal Red Men, supposed to number about 1,000,000 in 1492, not one had survived at the end of the sixteenth century. The present population is very unevenly distributed over the country, the western department embracing 1,000,000 of the whole number, while there are scarcely 100,000 in the central, and some 250,000 in the eastern division. These dwell mainly in the towns, of which Cuba boasts several of importance, amongst which the capital, Havana, takes decidedly the foremost rank.

6. *The City of Havana.*

Havana, or Habana, or, more fully San Cristobal de la Habana, lies on the north-west side of the island, not far from the Florida channel, on a level tongue of land stretching eastwards from the bay, and leaving open a navigable entrance 4200 feet long by 1000 in width. On a low hill to the left stand the forts of El Morro and Cabaños, erected in 1589 in the reign of Philip II., and on the point of the tongue to the right is the battery of La Punta. With its gaily painted houses and numerous strangely-fashioned church towers, the city presents an agreeable aspect, though somewhat detracted from by the enormous prison and *lugar de los Patibulos*, or place of execution, situated right on the port. To the right of the magnificent bay, extending all the way from the castle of La Fuerza, the oldest fort in the place, to the "Maria" barracks, or Caballeria, are the wharfs with their long lines of trading vessels lying right under the shore. On the opposite side of the bay stands La Casa Blanca, another fort with white walls, and farther on the village of Regla.

with its immense sugar warehouses—imposing buildings, whose iron-plated roofs glitter a long way off in the sun. The Caballeria fronts the bay, and is provided with an iron roof supported by iron pillars running along its whole length. The commercial world meets every morning and transacts most of its business in this place.

Havana, with its 200,000 inhabitants, in many respects resembles a large European city. It consists of the old town in the east, and the new town in the west, the excessively narrow and badly paved streets of the former being densely thronged, especially in the morning. Here the Opispo and other leading thoroughfares are lined with very elegant shops, while the "West End" is pervaded by a profound aristocratic stillness. The new town is altogether more of a suburb, where are situated the most frequented promenades, the finest private houses, warehouses, cafés, the theatre, and the Casino Español. Here also is the Paseo de Isabel, the finest thoroughfare in Havana, like a boulevard crossing the city from end to end, flanked by grand residences, with a double row of spacious carriage-ways, and further embellished with magnificent fountains and statues. Beyond are the Parque de Isabel, some very sumptuous cafés, the Tacon theatre, and the railway terminus. A continuation of the Paseo de Isabel is formed by the Paseo de Tacon, laid out in a similar way, leading to the Botanical Gardens, and to those of the Captain-General, also thrown open to the public.

The houses are very solidly built, with one, and very rarely two stories, and enormous windows, which, instead of casements are provided with bright-painted iron gratings. The number of hackney coaches and private equipages is very remarkable, the former being estimated at upwards of 6000, all doing well. The señoritas generally drive about in their "volantes," open carriages with wheels of

great size but light construction, and immense shafts. The "calesero," or driver, sits like a postillion, on horseback, dressed in a fiery-red gold-bespangled livery, the trappings and silver-mounted harness glittering gaily in the sun.

The numerous churches are somewhat tastelessly decorated, and visited regularly by the women only, who thus manage to fill up a good deal of their time during the day. In the cathedral of Havana repose the remains of Columbus. The Tacon theatre, one of the largest in the world, accommodates 3000 spectators, and is open daily, Sundays included, during the season. Besides the churches and theatres, the bull-fights are also specially patronised by the ladies.

Mr. A. Gallenga, who visited Cuba in 1873, gives an interesting description of the social life of Havana, although he was not so much struck with the city and its attractions as the inhabitants of the place always expect a new-comer to be. In spite, he says, of the raptures into which travellers new to tropical scenery are apt to fall, the country about Havana, on a first glance, presents itself as singularly flat and bare, and the town itself, after a few hours' evidence, suggests the definition of a city of smells and noises. He admits that the harbour is the finest in the world, but the scenery appeared to him to be rather pleasing than grandly impressive. What immediately strikes a stranger in the social aspect of Havana is, that, like the Rome of Romulus, it is a city without women. Hardly any other than negresses are to be seen about. Ladies, with any pretension to youth and beauty, would sooner die than venture out unprotected, and so uncommon is the sight, that foreign ladies, unacquainted with the custom and sauntering from shop to shop, become the objects of a curiosity not unfrequently degenerating into impertinence. The scarcity is a real one, and

not merely apparent. Out of a population of 205,000 souls, there die annually, if official statistics may be relied upon, 3782 white males to 1204 white females; while the deaths among the blacks or coloured people are, for the males, 1046; for the females, 1099. The causes of this disproportion between males and females are not far to seek. Besides the priests, soldiers and sailors, and the public functionaries, whose sojourn in the island is generally of the shortest, there are here thousands of Spanish immigrants, all males, attracted to the spot by high wages, who look upon themselves as birds of passage, and hardly dream of sending for women from home. Regard for women, however, is by no means enhanced by their scarcity, and there ensues an exclusively male society. Even with married people the difficulty of housekeeping, and the discomforts of domestic life, are so great that the Havana husband prefers the attractions of café and club, and in no town of France or Italy are there to be seen so many or such sumptuous and constantly-crowded *cafés* and *restaurants*. The Havana merchant is as eager to make money as he is ready to squander it, but the town supplies little besides gross material enjoyment for his money. A box at his third-rate opera at the Tacon Theatre and a drive in the dreary Prado are all the amusements he can have in common with his wife and daughter. For the rest, the women are left to mope alone at home, playing bo-peep with the passers-by from their window-gratings, or pacing the flat roofs of their houses, like so many "sister Annes" waiting for those who are never coming. With so little wholesome domestic society, and all the consequent profligacy, it is pleasing to hear the character universally given for good conduct to the Havana women.

But the real bane of social life in Havana lies in the deep-seated and hardly-smothered animosity of race.

one and the same race, yet irreconcilably divided against itself. There is no hatred in the world to be compared to that of the Cuban for Spain and all that belongs to it. The Creole longs for the day in which he shall be rid of everything Spanish, and of every other alien intruder coming here to suck the very life-blood from his veins. The native Spaniard, on the other hand, calls Cuba "this emphatically Spanish island," and affects to ignore the Creole. But to a stranger's eye the split is nowhere apparent; Guelph and Ghibelline go past, showing no symptom of the enmity which may at any moment array them in hostile camps. Thus there is a vast amount of plot and intrigue, fatal to all loyal, social, and even domestic intercourse; a depth of simulation and dissimulation, of spoken and acted lies, not to be fathomed by a stranger on a mere superficial survey. The underground war is going on in every street, and almost in every house in the city. Among the native Cubans education is more widely spread than among the Peninsular immigrants, but the Spanish settlers own the greater part of the landed property and the moveable wealth of the country. They have the lion's share of the trade of Havana in their hands, partly in consequence of their superior thrift and activity, but in a great measure owing to the privileges and monopolies awarded to them by an unscrupulous administration; but the fortune accumulated by the Peninsular father not unfrequently goes to wreck and ruin in the hands of his improvident Creole progeny. The Creole thinks, not unreasonably, that with the abolition of slave labour a new balance of fortune will come to be established, in which all the chances will be in his own favour. In that intricate problem of the slave-system lies the whole political and moral question, and the Cuban is as anxious for its speedy solution as the Spaniard is doggedly bent on its indefinite adjournment. With such a hopeless diver-

gence of views and tendencies, it is easy to imagine the constraint, the mistrust, the ill-will everywhere pervading society in Havana. None but the mere trader is at his ease here. For some of the Spanish, and even German, English, and other foreign shopkeepers, there is no spot in the world like this, where money can be more easily made. All imported goods, owing to protection and differential tariffs, pay enormously heavy duties; hence the merchant is entitled to sell dear. Fraud and smuggling are carried on to an outrageous extent; hence he is enabled to buy cheap.

The other large towns in Cuba resemble the capital more or less in their general arrangements, social habits, and pursuits of their inhabitants.

7. *Jamaica—General Features—Rivers—Minerals Population—Negroes and Jews.*

The passage is easy from Cuba to the British colony of Jamaica lying south of it, and the third in extent of the innumerable islands of this wonderful archipelago. Jamaica, in the old Indian language Xaimaca, or the island of springs, is generally flat along the coast, and surrounded, especially on the south side, with many reefs and shoals; thus its numerous harbours are difficult of access, but sixteen of them are practicable, and sheltered on all sides. The north coast is incomparably beautiful, and here are situated the little havens of St. Anne, Rio Bueno, and Montego. Bold bluffs, charming inlets, everywhere an abundance of rushing and roaring waters, green meadow lands soft as velvet, dark groves, songsters and butterflies, all combine to render this coast, and especially the district of the eight streams (Ocho Rios), a veritable garden of Eden.

The interior of the island is hilly, intersected by

many lofty ridges and deep valleys, and densely wooded. On the east rise the Blue Mountains, whose culminating point, West Peak, 7105 feet high, is one of the highest elevations in the whole West Indian archipelago. St. Catherine Peak, in the same range, is 4480 feet high. The Blue Mountains fully justify their name; at least we are assured by the experienced traveller Ludwig Schmarda that he has nowhere else beheld a more lovely and deeper blue than that of this range of hills, rising in soft outline in the full blaze of the sun.

Jamaica is well supplied with water; besides several small lakes the land is watered by nearly 200 streams, large and small, all teeming with fish and alligators. But Black River, in the south-west, is the only one navigable, small vessels ascending for a distance of 25 miles from its mouth. The hilly districts and the alluvial plains in the north are the most fertile portions of the island, which seems created expressly for the production of sugar, coffee, Jamaica pepper or allspice, and ginger.

Lead exists in large quantities, besides other minerals, such as copper, silver, zinc, antimony, iron, and manganese. In the forests are found many of the valuable timber-trees of the tropics, while English vegetables are grown on the higher grounds, besides the vine and apples, the tropical fruits also thriving in the greatest perfection. Cattle are numerous, especially noted being an excellent breed of horses, besides a fine race of mules. All these combined advantages render Jamaica by far the most varied in its resources of all the West India Islands.

But its prosperity received a severe blow from the revolt of the Negroes in 1865; for, like the rest of the Antilles Jamaica suffers from the excessive predominance of the African race. The whole population is estimated in round numbers at about half a million (more accurately 506,000), of whom not more than 13,000 are whites,

and even these are perceptibly diminishing. Of the rest 100,000 are coloured people, and nearly 400,000 blacks, all free citizens since the abolition of slavery by the English Government. In the Blue Mountains there still live on hunting and fishing the remnants of the so-called Maroon Negroes; the descendants of runaway Spanish slaves, who, after many hostilities, have at last reconciled themselves with the English, now generally siding with them against their black kinsfolk. The Maroons have retained to the present day a decidedly different character from the other Negroes in Jamaica.

Worthy of mention is also the large Jewish element in Jamaica, ever ready with their accommodating obsequiousness to lend a helping hand to Creole families bent on ruining themselves.

In Jamaica leprosy (Lepra or Elephantiasis Græcorum) is prevalent amongst the coloured races; to it the Jews also, and especially Jewish mulattoes, are liable, while it never attacks the whites. Thus has the Oriental race through all its wanderings retained its primeval tendency towards certain diseases, so true it is, as Mephistopheles says, that blood is "quite a special sap."

The largest townships in Jamaica are Kingston, the commercial capital, with 36,000 inhabitants, and Spanish Town, the official capital and seat of government, with 7000, both places situated on the south coast.

8. *Hayti: General Configuration—Mountain Systems—Rivers.*

A far more gloomy picture than that of Jamaica is presented by the island of Hayti, also called San Domingo or Hispaniola, next in size to Cuba, from which it is separated by the Windward Passage. The magnificent "land of high hills," as the word Hayti is interpreted

tapers to a narrow corner towards the east, where it is separated by Mona Passage from Porto Rico. Westwards it gradually widens, throwing off towards the neighbouring islands two considerable peninsulas, the smaller in a north-westerly direction towards Cuba, the southern and larger one towards Jamaica. Between these two peninsulas lies the bay of Gonave, Gonaives, or Leogane, and here also is situated the town of Port au Prince. The area of the island is 28,249 English square miles, being a little smaller than Ireland.

The coasts of Hayti are altogether more irregular than those of the other Antilles, giving rise to a number of bights, peninsulas, and headlands. The island is traversed by several hilly ranges, which, however, are not connected together. There may be clearly distinguished a north-easterly coast range; in the centre a table-land crossed by ridges, amongst which is that of Cibao, once famous for its gold, and culminating with the Yaqui peak, 9695 feet high; and lastly, a south-westerly coast range in the longer peninsula, attaining in one of its peaks the altitude of 7400 feet.

The Vega Real, or royal plain, is the fertile interior valley, enclosed between the northern and the Cibao ranges. It was so named by Columbus, who, on ascending the Santo Cerro, was enraptured by the prospect presented to his gaze. In this plain lies the principal agricultural wealth of the island. Here is cultivated the tobacco intended chiefly for the Hamburg market, and here also are situated the most industrious towns—Cotuy, La Vega, and Santiago. This tract, where navigable streams, the Yuna and the Yaqui, open up the interior, is moreover the centre of the mining district, yielding gold and iron.

Amongst the numerous rivers is also the Artibonite, flowing from the lofty Cibao range, and after a course of

95 miles falling into the bay of Gonaives. This and four other large streams divide the island into five main sections, with as many river-valleys. In the south-west are three large lakes, in the low-lying plain separating the south-western coast range from the central range.

9. *The Two Republics of Hayti and San Domingo.*

In order to understand the present condition of Hayti, the most fertile of the Antilles, and hence formerly called the Garden of the West Indies, it should be remembered that in the days of the Spaniards it was so overstocked with Negroes introduced to work on the plantations, that their descendants and the mulattoes between them now well nigh constitute the exclusive population of the island. The first European settlements in the New World were founded on its shores, and it was here that, after a few years' trial of native labour, African slavery was first introduced into America.

In the year 1795 Hayti was ceded to the French, who already possessed settlements in the western districts, and who now completely emancipated the Negroes. Hence, for more than three generations the Africans have here been exempt from slavery, and have accordingly had full time during that period of more than eighty years to give proof of their capacity for civilisation. They moreover soon succeeded in asserting their political independence of France, under the Negro Toussaint l'Ouverture, setting up an empire, which, however, collapsed in 1805. At that time the island was divided into two States—in the west the Negro empire of Hayti, in the east the Mulatto republic of San Domingo—which have up to the present time been animated by the bitterest animosity towards each other. Till 1859 the Negro State retained the monarchical form of government, though off the stage the

world has probably never witnessed a greater mockery of royalty. The burlesque fooleries of the English Christmas pantomimes were here seriously paraded before the eyes of the dusky sons of Africa under the infamous emperor Soulouque, whose reign lasted from 1849 to

NATIVES OF HAYTI.

1859. Since then Hayti also has become a republic, but for all that has not made a single step in advance.

Nor is the state of affairs much better in the mulatto republic of San Domingo. In both, one revolution follows another, the only variation being the wars that from time to time break out between the two States. Wearied of these everlasting feuds and disorders, San Domingo afterwards again submitted voluntarily to the authority of Spain, which, however, resolved finally to withdraw from

the place in 1864, whereupon the republic was once more set on foot.

Speaking generally, both States are sunk in the deepest barbarism. The inhabitants are becoming daily more savage with the spread of fetishism, especially the form of it known as "wudism" and serpent worship, which is said to be also gaining ground amongst the Negroes of the United States, and with which cannibalism is here also combined.

Of the two Republics, San Domingo is nearly twice the size of Hayti, but it is far less densely peopled than the Negro state. The former has a population of 250,000; the latter of 572,000, all nominally Roman Catholics.

Of the present condition of San Domingo, a recent traveller, Mr. S. Hazard, gives a deplorable account. The fertile plains lie untilled; the rich mines are unworked. There is not a plough in the whole island, and the only steam-engine ever set up was destroyed by the Spaniards in 1865. Vast forests containing abundance of valuable timber, including mahogany, are left to rot without any attempt being made to utilise their valuable products. And yet the land is a paradise of natural beauty. The magnificent bay of Samana, towards the eastern end of the island, displays on its shores a tropical vegetation of marvellous luxuriance; but it is a neglected wilderness. A few years ago this was ceded to an American company as a preparation, it was supposed, for the annexation of the whole eastern territory to the United States. The bay of Samana forms one of the best harbours in the West Indies. It is thirty miles in length, by about twenty-one in width, and is well protected from the prevailing winds. It is deep enough for the largest vessels, and has a narrow, but not difficult, entrance. The so-called peninsula, which was purchased by the American company, lies on its northern side, and has a length of

twenty-five miles, with a width of about ten: it is separated from the mainland by a small river and a narrow canal, and is therefore an island. A small town, composed of about eighty huts, called Santa Barbara de Samana, is situated on the peninsula, and has its share in the foreign trade of the district. San Domingo, the capital of the republic, with its population of 15,000 negroes and mulattoes, lies on the southern side of the island, and presents fewer natural advantages as a trading port. It is built on an eminence on the shores of a small harbour, formed by the mouth of the Ozama river, and has a picturesque appearance owing to its towers, gaudily-coloured roofs, and the ruins of its old fort. Among its public institutions are, besides, numerous old churches, hospitals, arsenals, and even a university; but all are in a state of decay sad to witness. There is no doubt that Samana will eventually become the capital of the island, from the superiority of its port and its commanding position with regard to Mona Straits, the chief thoroughfare for ships and steam-packets plying between Europe and the West Indies and the ports of Central America and Mexico. At present the trade of San Domingo is confined to the shipping of mahogany and dye-woods, and the export of tropical fruits; the scantiness of the trade being chiefly attributable to the absence of industry and the want of roads throughout the island. In a climate of such geniality, and with such exuberance of vegetation, the soil repays with three harvests a year the labours of the husbandman. Coffee, sugar, and tobacco are already grown there; and in mineral productions it far excels the other islands: iron is abundant; copper is found in several places, and old, half-forgotten gold-mines will some day be re-opened by a race more industrious than the present inhabitants. The American company who bought Samana Bay had the right to make its own laws and

establish its own police, build a fleet, levy tolls, establish banks, issue paper money, and, in short, to exercise all the rights of an independent government. It secured the right also to purchase land, if required, in other parts of San Domingo, and bargained to construct roads and telegraphs throughout the republic, in return for proportionate concessions of land. A new era seemed to have dawned for the unfortunate island, with the introduction of American enterprise on so magnificent a scale. These glowing prospects, however, were doomed to an early disappointment. The treaty with the American company was signed by the President of the Republic on the 10th January 1873. In March 1874 another decree was passed, by which the rights of the company were confiscated, on the ground of the non-payment of a stipulated annual rent.

In the Republic of Hayti, on the western side of this fine island, the state of things is even worse than in the eastern or Dominican part. All traces of the old French civilisation have vanished. There are no manufactures, and the government is bankrupt; the towns are in ruins, and the men spend their time in idleness, living on the industry of the women. The paper money issued by successive governments is enormously depreciated, by frequent repudiation, and by forgery on a large scale. Hayti, in fact, presents a sad picture of the incapacity of the black race for independent development. Even the most zealous abolitionists are obliged to confess that the majority of the Haytian Negroes are lower in the scale of civilisation than the aboriginal tribes of Central Africa. In the interior of the country fetish-worship is rampant, and mingled with the wildest superstition, and the celebration of rites to evil spirits. At least two-thirds of the population do not speak any language recognised by the civilised world. It is stated that even cannibalism is

practised, the people killing and eating, at certain of their festivals, their own children.

In Hayti seven-eighths of the people are pure blacks, the rest are so-called creoles, but really half-castes ; that is, simply mulattoes. In San Domingo, on the contrary, one-fourth of the population are pure negroes, the rest creoles, these mulattoes in both States constituting an aristocratic element after a fashion.

In San Domingo nothing is produced except tobacco and rum, while in Hayti some industries have been developed. But if the Hayti Negroes are more industrious than their mulatto neighbours, because perhaps more crowded together in a narrow space, there are also more thieves and scoundrels of various types to be found amongst them, because there is here more to steal. As regards the sanctity of the marriage tie, neither race is in a position to throw stones at its neighbour. The two constitutions also resemble each other, with the exception of the enlightened provision in Hayti preventing the whites from owning land, occupying any official post, exercising the right of voting at elections, or, in fact, ever acquiring the privileges of Hayti citizenship! Thus the whites are here as good as disenfranchised, while in San Domingo, on the contrary, they enjoy almost equal rights with the natives.

10. *Porto Rico—Karl Mauch's Account of the Island and its Inhabitants.*

The last of the Great Antilles is the Spanish island of Porto Rico, in shape a somewhat lengthened rectangle, 90 miles long from east to west, and 36 miles broad, and with a population of 646,000. The interior consists of an extensive mass of wooded hills running from east to west, with a mean elevation of 1600 feet, but culminating in a peak rising to a height of 3900 feet. With

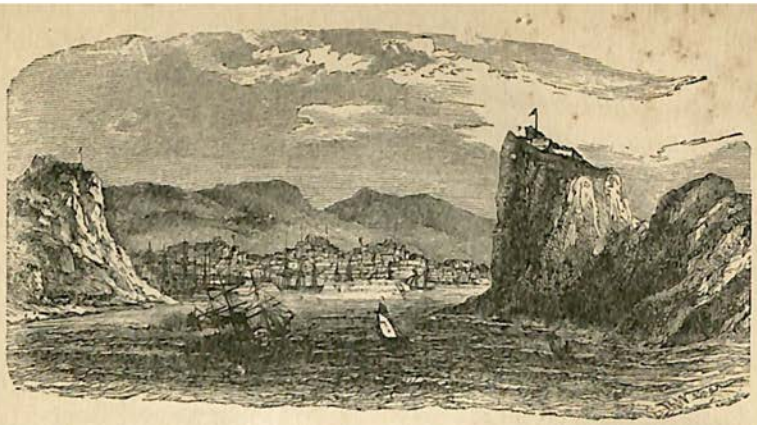
its flourishing tobacco and sugar plantations, cattle-breeding, mining, and commerce, Porto Rico is a thriving place. the healthiest of all the Antilles, and in its higher grounds adapted to the cultivation of several kinds of European corn. It is almost the only island in the Antilles which produces food sufficient for the consumption of its inhabitants. The principal articles of export are sugar and molasses, coffee, tobacco, and rum.

The state of affairs is here more satisfactory than in the other already described islands. There is no doubt a large Negro element here, as in the rest of the Antilles, the number being estimated at 300,000, but though twelve times smaller in extent than Cuba, Porto Rico contains half the population of that island. In other words, it is entirely colonised, cultivated, and peopled; hence the negroes are here compelled to work or starve, there being no more spare land on which they might support themselves with a minimum of labour. Slavery in Porto Rico was abolished by the Spanish Government in March 1873.

But the African in Porto Rico, as elsewhere, carefully avoids working more than is absolutely necessary. Speaking of San Juan de Puerto Rico, the capital, with a population of 30,000, and situated on the north coast, the late traveller and explorer, Karl Mauch, remarks that its appearance was far from edifying, and its streets abominably filthy, the odour proceeding from the wretched little houses rendering necessary an immediate application of the scent-bottle. Mauch crossed the island from north to south, on foot, in search of botanical specimens. But walking being here looked upon as a disgraceful method of locomotion, he was everywhere exposed to the ridicule of the people, especially of the women. These dames were met either perched on their houses, enveloped in white garments protecting themselves with their parasols from the scorch-

ing rays of the sun, rolling the stumps of their cigars from one corner of the mouth to the other, or else swinging in their hammocks and chewing tobacco at their open doors as the wearied and perspiring traveller passed along. He adds that the women contrive to spend their time pretty well between sleeping, eating, smoking, riding, lolling in their hammocks, and doing absolutely nothing.

He describes the island itself as charming, with its hills covered to the top with the most varied species of timber, amongst which the graceful palms raise their magnificent crowns high above the dense underwood. "It was a source of great pleasure to behold here, unfolding themselves under our very eyes in the wildest profusion, and filling the air with their perfume, the loveliest and brightest flowers, such as are seldom seen even in the finest European conservatories. But how wretched seems the rural population, emancipated two years ago, but still housed in their miserable bamboo and palm-leaf hovels, in the midst of the most delightful scenery. Since their enfranchisement these people do no work beyond planting a few bananas and sweet potatoes, and a little rice. Some poultry that they possess, swine, perhaps a cow, but in all cases a horse, mule, or donkey, bring them in enough just barely to cover their nakedness. It seems as if they were reverting to the primitive state of their forefathers transplanted hither from Africa. But, on the other hand, they are zealous church-goers, and abstainers from flesh meat on Fridays. They may be seen visiting the church four times during the day to offer up prayers for the Holy Father."



ST. THOMAS.

CHAPTER III.

THE LESSER ANTILLES.

1. *St. Thomas—Santa Cruz—St. Bartholomew.*

It would be needless here to attempt a detailed description of all the various groups collectively known as the Lesser Antilles, or Caribbean Islands. Such a description would necessarily reduce itself to a dry and uninteresting repetition of similar facts, and of names little attractive or useful to the reader. The most noteworthy points will, moreover, be found carefully tabulated at the end of the volume. It will therefore suffice here to specify a few of the more salient characteristics of particular islands that might else escape notice.

Special consideration is challenged by the Danish island of St. Thomas. The commercial relations of the West Indies have become in course of time so far modified

that this island has been gradually raised to the position of an entrepôt for the products of Porto Rico, San Domingo, the Windward group, and the north coast of South America. The great European steamship companies have made it the central point, whence ramify the various branch lines communicating with most of the other islands in the archipelago. In spite of yellow fever, hurricanes, and earthquakes, this favourably situated port has remained the general rendezvous for those oceanic lines, although the island itself has become almost a sterile waste since the emancipation of the slaves in 1848.

A recent traveller thus describes the town and the island of St. Thomas: "The most elegant houses are laid out in the form of an amphitheatre, on three hills enclosing the harbour in the background. Their whitewashed walls and roofs streaked with red, stand out clearly amidst the dark green of their surroundings. Behind them rises to a considerable height the chief range of hills in the island, dotted here and there along their steep slopes with little houses, which, when planted round about with shady trees, may some day become pleasant residences. For we here generally miss those umbrageous woodlands that are usually met with in the tropics, clothing the hills to their summits. On this account we were not very favourably impressed in our rambles over the island, which is rocky and very deficient in water. Cultivation is seen only in a few small tracts of alluvial soil; perennial springs and brooks are scarcely anywhere to be found, and we suffered from actual thirst as we trudged along, in the almost insufferable heat, over the bare rocks in the eastern part of the island. The land is moreover frequently devastated by terrific hurricanes and earthquakes. After a lapse of seven years, the traces are still to be seen of a hurricane, combined with an earthquake, when a wave was upheaved to a height of 30 feet, and rushed like a giant wall into

the harbour, bursting and raging furiously amidst the buildings along the shore. Houses on the high grounds, formerly occupied by the wealthy classes, are now in ruins, while their owners have either been impoverished or else have lost the heart to erect new dwellings in their place. The town, with its 20,000 inhabitants, is far from attractive, with its narrow and not very clean streets, and its small houses, covered, walls and roofs alike, some with boards, some with shingles, and others with sheet zinc. Doors and windows stand mostly open, affording a free view of the interior. The windows are unprovided with glass, being simply closed at night with 'shutter blinds.' The population is very mixed, consisting apparently chiefly of women, decked sometimes in the most gaudy colours, with hats, veils, and silk ribbons over their horse-hair chignons; shod with white or coloured morocco-leather high-heeled boots, but some also half draped in foul rags, that had once been white and clean, and others barefooted or with clattering slippers on their dirty brown feet. On the market-place are exposed for sale vegetables and fruits, mostly from the neighbouring islands of Porto Rico and Santa Cruz, the produce of the place itself being far from sufficient for the wants of the population. Even the drinking water itself must often be brought from Santa Cruz, especially towards the end of the dry season."

St. Thomas is a Danish possession, and belongs to the group of so-called Virgin Islands, some of which—such as Tortola, Virgin Gorda, and Anegada—are in the hands of the English. These islands are situated on a shallow submarine bank having rarely more than 25 fathoms depth of water, and joining on to the eastern end of Porto Rico. Santa Cruz, or Sainte Croix, also a Danish island, lies a few miles to the south, and is separated from the Virgin group by a channel upwards of a thousand feet deep. To the east the Dutch have settled on St. Martin, Saba, and St.

Eustatius, while the little island of St. Bartholomew close by has lately been ceded by the Swedes to the French.

All the rest of the Lesser Antilles, as far as Trinidad inclusive, belong to the English, the Guadeloupe group and Martinique alone excepted, which are French.

2. *Guadeloupe—Pointe-à-Pitre—Basse Terre.*

What is usually called Guadeloupe consists in reality of two islands of nearly equal size, united by a narrow isthmus, across which lies the channel of a narrow salt-water river (La Rivière Salée), and boasting of a very safe bay, at whose north-eastern extremity is the town of Pointe-à-Pitre. This bay is studded with islets, reefs, and shoals, all, however, well known to mariners. From 80 to 100 ships may often be seen lying off Pointe-à-Pitre, bringing French and American commodities, and freighted with return cargoes of sugar, rum, dyewoods, and coffee, mostly for France. A brisk trade is also maintained with the adjoining groups of Les Saintes to the south, Mariagalante on the south-east, and Désirade on the east, which are also French. But for the dark and black faces everywhere met with, Pointe-à-Pitre might be taken for a French city. Here are straight streets with foot-paths, bordered by houses from three to four stories high, mostly without courts or gardens. But the market-hall and the square, in which the theatre is situated, are surrounded by avenues of trees, where the horse-chestnuts of northern Europe are replaced by the *Hura crepitans* (sand-box tree) affording a grateful shade under its lovely soft green dense foliage. As in all other French towns, here also the hospitals are excellently arranged and adapted to the climatic conditions of the place.

The eastern peninsula, on whose west coast lies Pointe-à-Pitre, is called Grande Terre, and consists of an undulat-

ing elevated alluvial soil, above which rise a number of small steep round hills, or mamelons, to a height of perhaps not more than 1300 feet. These hills are composed of fossiliferous limestone, full of shells and corals, of the same species as are still found alive in the neighbouring waters. The ground is covered with a red, fertile soil, but is black and marshy in the low-lying districts, as well as at the Rivière Salée. Grande Terre is destitute of streams or springs, so that the want of water is often much felt in the dry season. Yet here are found the most numerous and important plantations, the twin islands being well cultivated, and everywhere provided with highways kept in good repair.

The second, or westerly peninsula, probably from the name of the capital, is called Basse Terre, but also Guadeloupe. It is entirely volcanic, and traversed by lofty ridges wooded to the top, while at its southern extremity the volcano of La Souffrière rises to a height of 5000 feet. Here are abundant hot and tepid mineral springs, besides a plentiful supply of excellent water flowing from the hills. Both islands produce all kinds of tropical fruits, especially sapodillas, mangoes, mammees (here called apricots), barbadines, pineapples, and alligator pears. The chief food of the lower classes consists of sweet potatoes and the mealy roots of a kind of Arum, here called *Madera* or *Matinga*.

3. *Martinique.*

The next most important French possession in the West Indies is the magnificent island of Martinique, rising from the blue waters not as a single volcanic cone, like many of its neighbours, but in three groups of rugged peaks. It is mainly peopled by Negroes, of whom a recent traveller speaks more favourably than of the same class in the other islands. He observes that here the

Negro is really a freeman, and that the women have adopted French manners and customs, the language included, to a remarkable degree. They converse pleasantly, with graceful action and great animation. Nor are these Negroes of the same repulsive type usually met with elsewhere; they may even be described as good-looking—many of them possessing Circassian features with black complexion—no thick pouting lips, and hair but very slightly crisped.

Unfortunately they have all the vices without the corresponding virtues of the French. The women, old and young, are gay and frivolous, pleasure-seeking and fond of dress, coquettish and of extremely lax morals. Their dress is mainly an adaptation of the French fashions to the climate, stockingless feet in elegant high-heeled patent leather shoes, a bright skirt reaching from the hips nearly to the ankles, with furbelows, flounces, and lace, or whatever else happens to be in fashion. This gown is supported from the waist by a blue or red sash, while the bust is covered by a fine, short-sleeved chemisette, always dazzling white, and with bright bows down the front and round the edge of the sleeves. On their neck and arms they wear several strings of white or gayer-coloured glass beads, and in their ears square-shaped gold earrings, of which the portion concealed by the lobe is often as thick as a lead pencil. They go either bareheaded, or else envelope the head turban-fashion in a gaudy silk kerchief.

One advantage the Martinique womenkind possess over many European people, and this is their scrupulous cleanliness. In this respect the island altogether may serve as a model; the very stones of the streets are clean and white, clear fresh spring water flows through well-constructed channels by the curb of the pathways, while all the houses are fitted up with cold baths, which, with

the tropical vegetation and delicious southern fruits, combine to render this island a little terrestial Eden.

4. *Barbadoes.*

Of the English Antilles, or Caribbean Islands, taking them in order from north to south, the most considerable are Anguilla, Barbuda, St. Kitts (or St. Christopher), Antigua, Montserrat, Dominica, St. Lucia, St. Vincent, Barbadoes and Grenada, to which may be added Tobago and Trinidad, which are generally considered as forming part of the same chain of islands, although physically they belong to South America, being situated in the shallow coast-waters of that continent. Most of the islands above enumerated as belonging to the Antilles proper are of volcanic structure, some of them, such as St. Kitts and St. Vincent, consisting, like the Basse Terre of Guadeloupe, and the more northerly Saba and St. Eustatius, of a single volcanic cone, with its sides furrowed by deep wooded valleys; but three of the more easterly of the group—viz. Barbuda, Antigua, and Barbadoes—are chiefly of coral formation, and of only moderate elevation above the sea-level. The most important of the three, and the most populous island of the whole group, is Barbadoes.

Barbadoes lies 78 miles to windward of St. Vincent, its nearest neighbour, and in size and proportions may be compared to the Isle of Wight, being 21 miles in length and about 14½ miles wide in its broadest part. The land rises in a succession of limestone and coral terraces, the highest point in the island reaching the moderate elevation of 1104 feet; and an almost continuous ring of coral reefs surrounds the coast, extending seaward in some parts nearly three miles. When first visited by the English in 1624 the island was found to be thickly wooded, but the timber has long since fallen to the axe

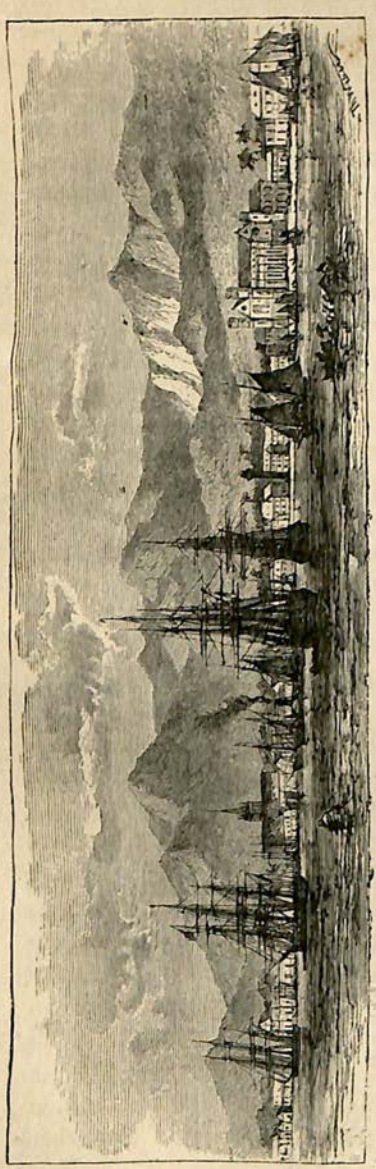
SUGAR PLANTATION IN THE ANTILLES.

To face page 183

of the planter, and three-fourths of the surface are now under cultivation. In its industrial and social aspects Barbadoes resembles an old settled country more than any of its sister colonies of the West Indies. This is partly owing to the absence of unreclaimed or waste land, and the density of the population, which reaches the important figure of 966 to the square mile, thus entailing the necessity of continuous labour by the wage-earning class in order to gain a livelihood. The emancipation of the slaves was not therefore followed by the evil results which were witnessed in Jamaica, and which at an earlier date led to the utter ruin of St. Domingo. The coloured population of Barbadoes at the time of the emancipation was about five times more numerous than the whites, and an efficient system of town and rural police was found to be essential; but the industry of the freed slaves and the produce and trade of the island were kept up with little interruption. The political and social history of the island has in other respects also been of a much more fortunate character than in the larger islands of the Antilles. Since the first settlement by the English in 1625 it has never changed masters, or been the scene of contention between rival European nations. The staple industry of the island is the growth and manufacture of sugar. Thirty thousand acres of sugar-cane (nearly half the cultivated land) are annually cut, and the average quantity of sugar yearly exported reaches the large total of 44,000 hogsheads. The total annual trade is enormous for so small an area, amounting to upwards of a million sterling each of exports and imports.

5. *Trinidad and its Asphalt Lake.*

Trinidad is the largest of the British Windward Islands, ranking in fact, in point of size, next to Porto Rico. In



TRINIDAD.

Trinidad is, moreover, to be seen, the greatest curiosity in the whole of the West Indian archipelago—a natural phenomenon such as exists nowhere else in the world. This is the famous asphalt lake that has been so well described by a recent English traveller. It is reached from the port of La Brea, which place itself is everywhere surrounded by pitch. The very ship anchors in pitch, the passengers disembark on a pitch wharf, pitch lies heaped up far and wide in the harbour ; in whatever direction the eyes are turned they light on nothing but pitch; pitch, and the current market price of pitch, are the one burden of conversation. A more wretched place to live in it would be difficult to imagine, and the few Europeans condemned to reside here, even for a short interval, suffer much

from ague; while the Negroes themselves fail to become acclimatised to the baneful atmosphere of the place.

The road from La Brea to the lake, scarcely a mile and a half long, crosses an utterly desert country, all the timber formerly growing here having been either cut down or used up as fuel. At the first glance it looks like any other woodland lake, nor do we become all at once aware that its basin contains not water but pitch. Its borders are covered with tufts of grass and rushes, while the scenery is varied by several wooded islands studding the lake. But the illusion is soon dispelled by the colour and consistency of the fluid. The surface of the asphalt is nearly everywhere strong enough to bear your weight, and looks as if it had been just swept clean with a besom. The whole lake is broken by clefts and fissures, one might almost say valleys and abysses, where the pitch, evidently oozing up from various centres, has failed to unite into one compact mass. These fissures vary from a few inches to several yards in depth and extent, and when visited by the writer from whose account these particulars are taken, were full of water. In one of the larger pools he saw an ugly-looking fish, weighing perhaps about a pound, which he fancies must have been a "warm-water fish;" though it was still incomprehensible to him how the creature could possibly exist in a fluid so saturated with sulphur and bituminous substances.

Crossing the clefts at first on the back of a gigantic Negro, and afterwards on planks thrown over them, the traveller reached the opposite side of the lake, and thence, in a few minutes, to the edge of the wood, where are situated the so-called "pitch volcanoes,"—little hillocks, generally not much more than half a yard high, with an opening in the centre about six inches in diameter. In all these craters the pitch is still in a fluid state, here

and there welling up to the edge, often even flowing over, but generally remaining more than half a yard below the surface; nor can any traces be detected of greater activity at any former period.

Farther on the traveller came to an oil-well, petroleum also having been found in many places in this locality, the stench of which, however, necessitated a speedy retreat to the lake. Here a crowd of black labourers were now busily engaged digging a deep hole in the centre, the pitch, hitherto extracted mainly from the surface, not having proved so suitable for the preparation of gas as it was hoped might be the case with the masses lying at a lower depth, and consequently less exposed to the effects of air and water. The Negroes had already brought a considerable quantity to the surface, looking very pure and clear, and so hard and brittle that it flew about like chips of flint at every stroke of the pickaxe. The workmen assured him that in about two days the whole space excavated would be again filled up. At one spot alone were there signs of recent emergence of pitch on a large scale. Here the surface was much too soft to be walked upon; being apparently of about the consistency of treacle, and of a light-brown colour. Slight explosions of gas were constantly taking place, followed by noxious vapours rising from the seething mass, and accompanied by little trickling streams of water and bright air-bubbles.

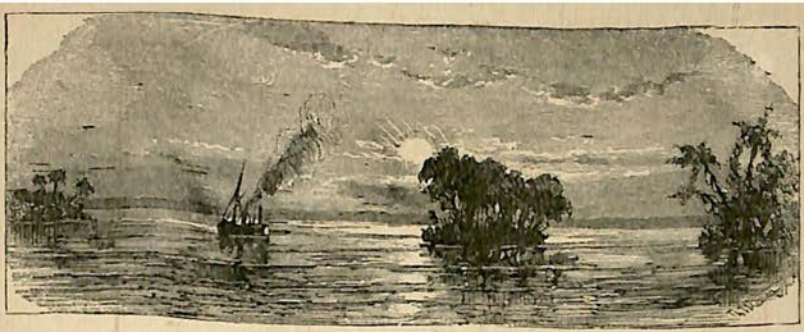
The island of Trinidad is one of the most thinly peopled of the Antilles. Although very little smaller in size than Porto Rico, it contains only one-fourth of the population of that productive island. A census taken in 1881 gave the number of its inhabitants as 153,128. Its surface consists chiefly of fertile plains and valleys for the most part still covered with luxuriant forest. The island is traversed by three hilly ranges, the highest of

which runs near the northern coast, towards which it descends rather precipitously, whilst sloping gradually on the opposite side towards the interior. The highest point to which these ranges attain scarcely exceeds 3000 feet. Between them lie a series of highly fertile, well-watered valleys, which, in some cases, are nearly enclosed by transverse ridges connecting the main chains. The forests are tenanted by the same species and genera of animals as the mainland of South America. Here we meet, among the monkey tribe, with the frolicsome Sapajous (*Cebi*) and the stentorian Howlers (*Myctes*), which we look for in vain in the other islands of the Antilles; and with these forms are associated sloths, ant-eaters, armadillos, and other mammals of the continent. The beauty of the tropical forms of vegetation has been well pourtrayed by the facile pen of Charles Kingsley, in the narrative of his visit to Trinidad, published under the title of *At Last.* One of the most glorious features is the frequency of blossoming forest trees of great height, whose crowns at certain seasons become vast domes of large brilliantly-coloured flowers. Groves of cacao, with the flowers and the large lemon-coloured fruit hanging from the trunks and branches of the trees, and vast thickets of feathery bamboos, vary in many places the monotony of the "high-woods;" while an infinite diversity of bushy melastomas, with their elegantly-veined leaves, myrtles, dwarf palm-trees, and large glossy-leaved *Heliconiæ,* form a luxuriant undergrowth, lining everywhere the forest paths.

Although Trinidad suffered, together with the other British islands of the West Indies, from the commercial and social consequences of the abolition of slavery, it has been quicker than some of them to recover its former prosperity; a circumstance due chiefly to the large importation it has encouraged of Coolie labourers. Its position near the mouth of the Orinoco—the great navigable

stream which gives access to a vast interior region of the South American continent, the resources of which are only just beginning to be developed—offers great prospective advantages; thus it promises to become one of the most valuable of the British possessions in the West Indies.

Stanford's Geog. Estabt. 55, Charing Cross.



MOUTHS OF THE AMAZONS.

SOUTH AMERICA.

CHAPTER I.

OUTLINES OF THE COAST.

1. *Points of Resemblance between the three Southern Continents.*

THE South American Continent, stretching southwards from the Isthmus of Panama, presents a solid, compact mass of land, in one important respect closely resembling the northern half of the New World. For here also a long strip of the coast faces the north, thence from about the 5th degree S. latitude gradually tapering to Cape Horn at the extreme end of Patagonia. Its configuration also offers in some other respects a striking similarity to the African and Australian continents, all three looking as if they were almost cast in one mould. Each of them comes to a point eastwards, though that of South America, Cape S.

Roque, at 5° 27′ S. lat. and 35° 20′ E. long, is considerably flattened. Moreover, the north-western seaboards of all three bulge out more or less, a feature which is however least apparent in South America, whose greatest length is found in a northerly and southerly direction. Lastly, all three grow narrow towards the south, this feature being most conspicuous in the case of South America.

2. *Continuity of Northern and Eastern Coast-lines.*

The contour of this continent presents the same unbroken continuity that we have already observed in Africa, and shall again meet with in Australia. Very striking is the absence of peninsulas, for such feeble attempts as the peninsular projections of Guajira, Paraguana, and Paria, on the north coast, St. Josef on the east, and Tres Montes on the western seaboard of Patagonia, scarcely call for serious consideration. Along the north coast, including the northern seaboards of the United States of Columbia, Venezuela, the three Guianas, and the empire of Brazil, the only noteworthy bays or bights are the gulfs of Darien, Venezuela, with its sack-like continuation inland, the lake of Maracaybo, and Paria, almost rendered a land-locked sheet of water by the British island of Trinidad. But the most important inlet on the north coast is undoubtedly the great estuary of the Amazons, whose real size is considerably disguised on the maps by the large island of Johannes or Marajo, lying at its mouth. This estuary, and in fact all the broad rivers and channels of the Amazons, navigable by sea-going vessels for hundreds of miles inland, ought justly to be reckoned equivalent to the same amount of indented coast-line in other continents.

There are of course several other bights and projections on the north coast, all duly named on the maps, but none

of them call for special mention here. Still less varied in its outlines is the east coast of South America, or at least such portions of it as belong to Brazil and the Republic of Uruguay. Here there is nothing to break the uniformity of the coast-line except a few small bays, the most noted of which are that of All Saints at Bahia, and that of Rio de Janeiro. Along the extreme southern coast of Brazil, that is, in the province of Rio Grande do Sul, we meet with lagoon formations, the largest of which is the Laguna de los Patos, penetrating far inland.

3. *The Southern Seaboard.*

More varied in outline is the southern continuation of this coast, where lies the vast basin of the River Plate, flanked on either side by the cities of Monte Video and Buenos Ayres. This, however, cannot be regarded as an estuary in the ordinary sense of the word, but merely as a spacious inlet in the coast, intercepting the course of the Parana and the Uruguay. Similar bights, such as the Bahia Blanca, the gulf of San Matias, and that of St. George, occur all along the Patagonian coast, but these in all cases are the recipients of insignificant streams only.

The whole north-easterly and easterly seaboard of South America is free from coral-reef formations, and, with the exception of Trinidad, is destitute of islands until we reach the extreme southern point. Here the mainland is broken up into the archipelago of Tierra del Fuego, while eastwards from the coast lies the group of the Falkland Islands, the Patagonian fauna and flora of which clearly show that they belong to the South American system, from which they are separated only by a shallow sea.

But it is otherwise with the islands of South Georgia and Aurora, situated still farther eastwards, and which are evidently purely oceanic islands.

As large islands usually occur only on the eastern seaboard of continents, it need create no surprise that none such are found along the west coast of South America. Those, however, that lie along the Patagonian and Chilian shores are remarkable for the unmistakable fiord-like character of the channels which separate them from one another, and from the mainland, thus breaking up the coast into a number of islands and peninsulas. Such fragmentary formations are to be recognised in the whole series of islands stretching along the west coast from the Strait of Magellan, as far northward as the 42d degree of south latitude. Chiloe, the northernmost of these, belonging to the Republic of Chilé, and famous for its prodigious coal deposits, though not the largest, is the only one of them possessing the least importance. It may be remarked that in North America, Europe, and New Zealand also, fiords occur exclusively in the colder latitudes, rendering plausible the hypothesis which has been advanced to explain their origin—namely, that they have been scooped out by the action of ice during the glacial epoch of geologists.

4. *The Pacific Coast-line.*

Northwards from Chiloe the Pacific seaboard stretches almost in a straight line as far as the 20th parallel of south latitude. As far as and a little beyond the tropic of Capricorn, this rocky coast belongs to Chilé, then for a short distance to the Republic of Bolivia, and thenceforth to Peru, Ecuador, and Colombia.

At the Peruvian seaport of Arica the land begins to bulge out westwards, and continues to do so till beyond the equator, without however otherwise presenting any further change in its general features. Besides the bay

of Panama, the gulf of Guayaquil is perhaps the only one deserving to be so named, and even the bay of Panama itself belongs to a large extent to the hook-shaped isthmus connecting the two great divisions of the American continent.

CHAPTER II.

GENERAL FEATURES OF THE SOUTH AMERICAN MAINLAND.

1. *Distribution of the Mountain Ranges.*

THE outlines of the South American continent, as here briefly sketched, are entirely independent of its general configuration, or of the vertical arrangement of its surface, by which we understand the various elevations and depressions of the land, according as it rises into mountains and lofty uplands, or sinks into low-lying plains. At the same time it will be readily admitted that the direction of mountain ranges cannot be without influence on the leading outlines of lands and continents. This is clearly seen in South America, which is even more sharply confined between highlands than the North American mainland. From the Isthmus of Panama to Wollaston Island, at Cape Horn, its western seaboard is bordered by a double and even triple range of the Andes, as is also the case with the north coast confining on the Caribbean Sea. The region lying between the two giant streams of the Orinoco and the Amazons in the north is also of a mountainous character, while we have lastly the Brazilian highlands, whose eastern limits converge upon the Atlantic Ocean. But from the River Plate southwards we meet mainly with wide plains.

The topographic conformation of South America suggests many views that will receive fresh support from a consideration of the configuration of North America. The

PHYSICAL MAP OF SOUTH AMERICA

London; Edward Stanford, 55 Charing Cross, S.W.

most striking feature of the southern half of the New World is unquestionably the Cordillera of the Andes, attaining the highest elevation not only of South America but of the whole continent, and including many volcanoes still in full activity. This gigantic chain runs parallel with the western seaboard, and so close to the coast that the lowlands on its west side almost disappear when compared with the broad plains spreading eastwards towards the Atlantic.

2. *The Andes.*

As all more recent mountain formations have been raised along the shores of the ocean, one feels disposed *à priori* to look on the Andes as amongst the latest upheavings of the land. This conclusion is further justified by the almost straight line of the west coast, a feature which here, as elsewhere, is almost invariably an indication of upheaval. As the Rocky Mountains of North America are younger than the more easterly Alleghanies, so are the highlands of Guiana and of Brazil far more ancient upheavals than the Andes, situated further to the west, and chiefly of volcanic origin.

The Andes are specially distinguished by their strictly parallel lines, and by the symmetrical arrangement of the three Peruvian ranges, where every divergence from the main direction is repeated in all three systems. No countenance, however, can be given to the theoretic views of former geographical works, representing the Andes as a series of crests, intersecting valleys, ravines, and streams flowing down on both sides. This description is certainly inapplicable to the middle section of the Cordilleras, and very probably also to their northern portions. Here there are neither watersheds nor sierras, the land forming an enormous plateau from 8000 to 11,000 feet above the sea-level, and stretching east and west for distances of

several days' journey. The mountains, mostly extinct volcanoes, do not form regular ranges, but are scattered disconnectedly over the surface, while the intervening plains often present the appearance of being perfectly level. Neither are there any gorges, and these elevated uplands might be traversed everywhere east and west but for the absence of water stations. Gorges, or narrow ravines, are found in the Andes, but only on their eastern declivities, where they have been scooped out by the action of the streams, fed by the copious precipitation from the cloud-bearing winds from the east.

The former theories, representing the Cordilleras as connected uninterruptedly with the North American ranges by means of the Isthmus of Panama and the Mexican highlands, and thus extending for a distance of 9000 miles from Cape Horn northwards to the Arctic Ocean, we have already shown to be pure fancy, and further evidence of this will appear in the following chapter.

3. *The Eastern Slopes and the Three Great River Systems.*

In the case of all recent mountain formations, it is always necessary to distinguish between their seaward and landward slopes. The seaward slopes of the Andes, like those of the Rocky Mountains, face the Pacific Ocean, and here also is repeated the phenomenon that these seaward slopes are considerably more precipitous than those facing inland. The latter are seemingly diminished in height by elevated plateaus, or raised terraces, falling away towards Brazil and the regions of La Plata. This gradually sloping character of the eastern side of the mountains is magnificently displayed in the Republic of Ecuador, where numerous large tributaries of the Amazons, such as the Napo and the Pastaza, have scooped out deep valleys

through hills and highlands, which gradually become lower until they merge into the great eastern plain. Farther south, on the other hand, on the upper waters of the Huallaga, in Peru, the most eastern ridge of the Andes descends precipitously into the plain. On these terraces are developed the three gigantic river systems of South America—those of the Orinoco, the Marañon or Amazons, and the Plata. The two first flow parallel to each other from west to east, being separated by the intervening mountain range of the Sierra de Parime, though not so completely as to prevent the Casiquiare from effecting a junction between these two water systems.

The Plata, or, more properly, the Paraná, pursuing mainly a southern course, rises in the elevated table-lands of Brazil. Its affluents spread out like a fan over the central regions of the mainland, so that in this river system are concentrated streams such as the Rio Grande, rising near the east coast, and the Pilcomayo, whose source lies so far west as the eastern slopes of the Andes.

The interior of these Brazilian and Bolivian regions has been far too insufficiently explored to enable us to form a correct notion of the ramifications of the lofty ridges enclosing this vast river basin. In Eastern Brazil, however, there is clearly to be distinguished a triple system of *serras*, as the mountain ranges are here called, the most easterly forming a coast chain along the Atlantic seaboard. These serras in the interior are connected by an extensive table-land, occupying most of the southern provinces of the empire; to the north they run between the valleys of the great southern tributaries of the Amazons, declining in height as they approach the main stream of that mighty river system. Similar arrangements are constantly met with; as in Venezuela, where the north coast, like the east coast of Brazil, is flanked by a Cordillera, between which and the above-mentioned

Sierra de Parime lies the broad valley of the Orinoco system.

A similar coast range may be said to exist even in Peru, where the principal elevations of the Andes are not far removed from the shore; and this is itself nothing but a repetition of the spectacle presented by the configuration of California, where we also find a coast range lying between the Sierra Nevada and the Pacific seaboard.

4. *Other River Systems—Absence of Lakes.*

Between the second and third of the above-mentioned eastern Brazilian serras lies the basin of the Rio San Francisco, which follows mainly a northern course, and is unconnected with any other South American river system. This continent has many other such independent river systems, but none of them approach that of the San Francisco in importance. It has, however, a not inconsiderable north-western rival in the river Magdalena, developed in the Andes and the parallel chains, and flowing through the United States of Colombia into the Caribbean Sea.

Very striking is the dearth of fresh-water lakes in South America. In the north they are limited to Lake Valencia, in Venezuela, and the lakelet of Amucu; in the Peruvian and Bolivian Andes to Titicaca, connected by means of the river Desaguadero with the smaller lake Aullagas farther south. A careful scrutiny of the map will doubtless enable us to detect the existence of a not inconsiderable number of other small basins of still water, especially in the Orinoco region, and in the valley of the Amazons, as well as even on the Bolivian table-lands. None of them, however, are of sufficient size to call for special mention, and in the plains of the great rivers, where extensive so-called lakes occur, they are to be con-

sidered as expansions of the river-beds themselves rather than as true lakes.

But, when we reach the 40th parallel of south latitude, we again meet with a series of lakes in the higher valleys, and along the flanks of the southern Cordilleras; these are situated in the same region, and may in fact be ascribed to the same glacial causes, as the already-described Patagonian fiords.

5. *The Atacama Desert and the Quebradas.*

It has been remarked that an absence of fresh-water lakes is everywhere observable in countries swept by dry winds. But a dearth of copious rainfalls also produces steppes and wastes, of the latter of which South America possesses one only—the desert of Atacama, on the Bolivian coast. Although within the zone of the south-east trades, the whole coast-district of Peru and Northern Chilé lacks the moisture necessary for vegetation, because these currents of air are deprived of all their humidity in crossing the Andes. On the other hand, the winds from the Pacific blowing from a cool sea, and being of low temperature, their scanty vapour is dissipated by the heat radiated from the land, without leaving a drop of moisture to refreshen the thirsty soil. The desert of Atacama itself seems to have risen above the sea-level only within a recent geological epoch, and Professor Philippi of Santiago even asks the question whether in former times rain was not more abundant there than is now the case. If so, this circumstance might perhaps supply a fresh argument to those who maintain that there has been a perceptible diminution of the rainfall generally within the memory of man.

As already observed, there are no valleys in the ordinary sense on these elevated plateaus; but in their place

we find a considerable number of the so-called *quebradas*, often from 500 to 1000 feet deep, and with almost perpendicular walls, herein contrasting with the *cajones* of the central and southern Chilian Cordilleras. These quebradas have been evidently formed by running water, as are the gorges of similar nature through which rivers now flow down the eastern flanks of the Andes near Cuzco, so that it becomes impossible to account for their formation without supposing a greater rainfall than these regions are now blessed with. Doubtless we have a regular downpour in this desert every twenty or fifty years or so, but nothing at all sufficient to explain the existence of these quebradas. Hence one feels strongly inclined to believe that in former times it must have rained much more frequently and abundantly than at present.

This supposition is perhaps confirmed by an interesting fact in botanical geography. In the Republic of Ecuador, and in the northern parts of Peru, there would seem to grow several kinds of plants which are found also in Chilé, farther south, but nowhere in the intervening zone. The above-mentioned savant, Dr. Philippi, quotes as cases in point the *Berberis Darwini*, *Gunnera scaba*, and the *Desfontainea spinosa*.

In the animal kingdom we meet with an analogous fact. The *Cervus antisensis* of the Peruvian and Bolivian Andes, fully described by d'Orbigny and Tschudi, seems to be identical with the *Guemul* or *Cervus chilensis*, which begins to show himself in central Chilé, becoming more numerous farther south along the western slopes of the Andes, between Chiloe and the Strait of Magellan.

It appears almost impossible to explain the distribution of this species of deer, and of the above-mentioned plants, if we assume the existence of the wide rainless and herbless desert of Atacama when they first came into being. The three plants of northern Peru and Ecuador

may doubtless not be identical with, but only varieties of, the same species as those of Chilé, and the Peruvian *Desfontainea* especially would seem to be considerably different from that of Chilé spoken of by Dunal as the *Desfontainea Hookeri*. But, even while allowing for such differences, it is still very remarkable to find animal and vegetable species, closely resembling each other, in two remote regions entirely separated one from the other by an intervening desert, which it is impossible for them now to pass.

CHAPTER III.

THE CORDILLERAS OF THE ANDES.

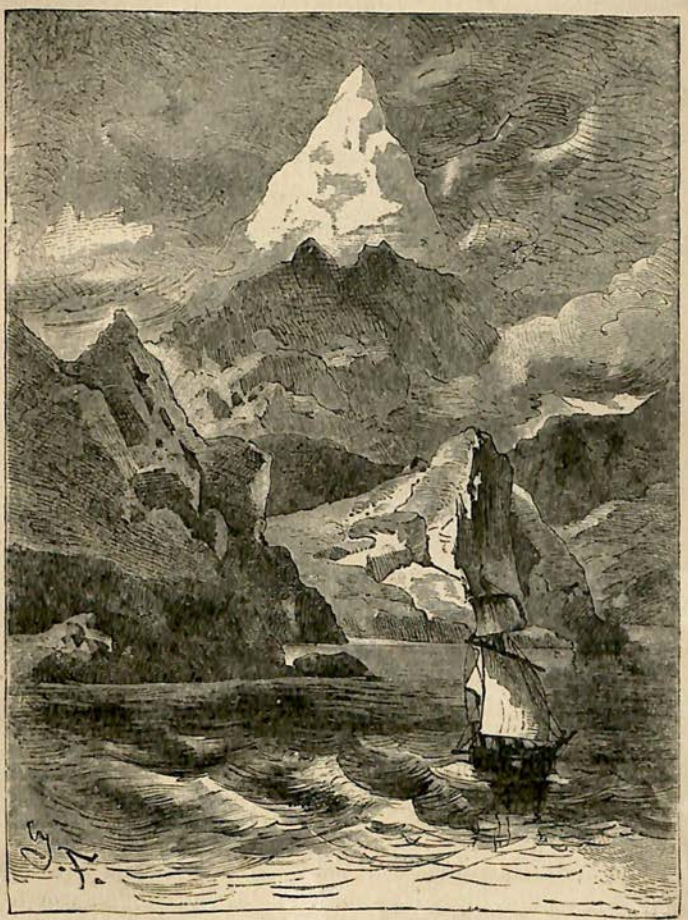
1. *Extent and Main Divisions.*

A MOUNTAIN range stretching for a distance of 4500 miles, from Cape Horn to the Isthmus of Panama, must naturally be of a very varied character, and must accordingly be divided into several distinct portions in order to give an adequate survey of the whole. In the formation of this vast range three main sections are clearly to be distinguished:—The solitary chain of the Southern Andes; the double chain of the Central Andes, with their elevated upland valleys, groups of connected hills, and mountain lakes; lastly, the diverging Northern Andes, with their low-lying valleys and detached elevations.

2. *The Patagonian and Tierra del Fuego Mountain Systems.*

The single range of the Southern Andes begins to be better known as it enters Chilian territory, its southern or Patagonian section being still, for the most part, unexplored. Hitherto the glacier-forming mountains that traverse the archipelago of Tierra del Fuego were looked on as belonging to the western system. In this case the dreaded Cape Horn, with its bare black bluffs, would form the extreme southern end of the Cordilleras, in 55° 55′ S. lat., and 68° 6′ W. long. As the "Land of Fire" will be separately passed in review farther on, it will suffice here

to remark, that none of its mountains, as far as they have yet been surveyed, attain an elevation of 7500 feet.



MOUNT SARMIENTO.

Amongst them, however, is one of the most imposing peaks of the whole Andean range—Mount Sarmiento—

which rears its spotless cone of snow to a height of 6910 feet above the sea, on the borders of Cockburn Channel, not far from the open Pacific. The beauty of this peak is enhanced by the numerous blue-coloured glaciers which descend from the snowy cap through the dusky woods of the mountain's base to the sea, looking, as Darwin expresses it, like so many frozen Niagaras.

Beyond the Strait of Magellan the Andean chain is assumed to continue its course northwards through Patagonia, keeping close to the west coast, but at a somewhat lower elevation. It would, however, be perhaps more correct to say that neither the hills of Tierra del Fuego nor the Patagonian coast range form part of the Cordilleras, and to regard them as independent highlands, at least until geological research has shown them to be connected with the Andes properly so called.

As for the scarcely-known Patagonian Cordilleras, they would seem to consist of a series of volcanic peaks springing from the lofty table-land of a steep coast, intersected with fiords, and worn by the constant action of the ocean waves. But it may be doubted whether these high peaks form a regularly-connected sierra, while it is certain that between 44° and 43° S. latitude, they are cut off from the mass of the Cordilleras proper by a lacuna or break, where a small stream flows down from the east side of Patagonia into the Corcovado gulf, on the Pacific seaboard. The line of the real Andes would thus seem to begin somewhere about the parallel of the southern end of Chiloe, so that to them would belong the volcanoes of Corcovado and Minchinmadiva, the latter of which is usually described as the highest summit of the Patagonian range.

3. *The Chilian Range.*

The single Cordillera, which may briefly, though not

quite correctly, be called the Chilian Range, forms the frontier line betwen the two Republics of Chilé and La Plata, and even in its southern portions betrays a somewhat varied character. In the neighbourhood of the volcano of Osorno, and reaching as far as that of Villarica, lies the already-mentioned lacustrine region, stretching along both sides of the mountains. The most considerable of the lakes here situated are that of Nahuel-huapi in the east, and in the west those of Llanquihue, Ranco, and Riñihue; and the streams flowing out of them turn, some westwards to the Pacific, some eastwards to the Atlantic. In Lake Nahuel-huapi rises the river Limay, a tributary of the Rio Negro, which crosses the whole width of Patagonia, and discharges into the Atlantic. The outflow of Lake Riñihue, on the contrary, is in connection with the Rio Valdivia, disemboguing into the Pacific Ocean.

For the development of a possible future railway system across the Andes, the table-land formation of these highlands will be found of great advantage.

Farther north the Chilian Cordillera retires more and more from the coast, leaving a long strip of land descending in terraces to the Pacific seaboard, and forming the Republic of Chilé. This Chilian Cordillera attains a considerable elevation, its central section being some 13,000 feet above the sea-level, while the highest summits, which rapidly increase as they proceed northwards, reach 22,297 feet in the Cerro del Mercedario, and in Aconcagua, where more recent and reliable explorations have failed to discover any volcanoes, they rise to a height of 22,415 feet. But the passes leading over this range eastwards to the Argentine Republic are described as unusually difficult, none of them, with the exception of the above-mentioned interruptions, being lower than 7200 feet above the sea, while several are found to have an elevation of even 13,000 feet.

After about the 35th parallel the Andes split into a double, and in the province of Aconcagua even into a triple range. Their northern branches embrace the lofty plateaus of Catamarca and Tucuman, their more southern ramifications the table-lands of Despoblado and Yavi.

All the eastern slopes of this section are gradual and terrace-like, and relieved with a number of romantic hilly landscapes, many of them abounding in mineral wealth. Where they face the Pampas of the Argentine Republic they are principally of igneous formation, and numerous extinct volcanoes are found between Mendoza and the Planchon Pass; basalt, lava, pumice-stone, and volcanic ashes abound on every side; but stratified rocks are also seen, limestone and sandstone occurring in various places. Many of the mountains consist of a soft rock, in character somewhat like chalky clay, which, from exposure to the air, is very much worn, assuming in many cases fantastic shapes like the Gothic turrets of some old church or castle. The variety of colouring in the soils which compose the mountain slopes is sometimes most striking and beautiful—blue, red, yellow, and white meeting in strong contrast, and producing a wonderful effect. This is, in a great measure, due to the almost total absence of vegetation, which is scarcely to be found in this part of the Andes, except in the valleys and near water. Along the eastern slopes, approaching from Mendoza, not a tree is to be seen, except an occasional one in the most sheltered spots, but a coarse kind of brushwood is common in many places.

4. *The Bolivian Andes.*

Still farther north the Andes enter the territories of Bolivia and Peru, which are intersected by four main ranges in this region, running in a somewhat north-westerly direction, and rising above the line of perpetual

snow, here fixed at 16,000 feet. The first two of these Cordilleras are characterised by round outlines, the others by sharp, jagged crests, such as are described as sierras or "saws."

On leaving the palm and banana groves of the low lands, and ascending the slopes of the Cordilleras, we observe the gradual lowering of the temperature, and corresponding change of vegetation, accompanied by a change also of the climate, which here varies, so to say, with each succeeding zone. Forest trees and bushes reach as high as 5000 feet; at 5000 feet higher we attain the upper limit of the various plants of the Cactus order, mostly of the same genera as in Mexico or California, and of which whole forests here flourish. The wooden stem of the Cerei, often growing to a height of 20 feet and upwards, is used for building purposes and as firewood; while the Opuntiæ afford sustenance to the valuable cochineal insect, and also produce the delicious Indian fig, here called Tunas. Up to this point the ordinary North American and European vegetables also flourish, besides the *Alfa* or *Alfafa*, a sort of clover, which is extensively cultivated by means of artificial irrigation, and serves as the principal fodder for horses, mules, cattle, and sheep. Yet between the months of May and July the water freezes here to the thickness of an inch during the night, while at midday in the shade there is an average temperature of 55° Fahr. (during the rest of the year 64°), but in the sun 110° and upwards.

This great disparity between the temperature in the shade and in the sun is everywhere met with on elevated table-lands at a height of more than 10,000 feet, and is explained by the rarefaction and dryness of the atmosphere, which, unlike damp air, is unable to retain and diffuse the solar heat, whether on its direct passage from the sun or reflected from the ground.

The zone between 10,000 and 13,000 feet is naturally still colder, though even here the midday sun is tolerably fierce, corresponding somewhat with that of the Hudson's Bay region and North Europe in summer. Amongst the plants here growing wild mention may be made of the *Queñua* tree, the representative of the North European pine, several species of the *Tola*, a hard resiniferous shrub, resembling the European juniper, the *Paja brava*, a short soft grass, and at the extreme limits of this zone the *Yareta*, a dense resinous moss, covering the rocks to a thickness of one foot, and when dried serving the purposes of fuel.

The Indians residing in this region cultivate nothing but a kind of bitter potato, the *Papa luque*, some *quinoa*, resembling our buckwheat, and *cebada* or barley, which, however, does not ripen, and in the higher zones does not even form the ear, and is accordingly used only as fodder for the cattle.

Above 15,000 feet rise the crests of the Cordilleras, covered with perpetual snow, and here organic life ceases almost entirely. The animal kingdom, owing to the narrow expanse of the land, is little developed on the slopes of these Cordilleras. Birds are of a larger size and more numerous in the lower regions, always excepting the condor, which prefers the higher zones. In the middle and upper regions we find the guanaco (huanaco) or wild llama, a representative in the New World of the camel; the grey *sorro*, corresponding in the same way with the European and Arctic fox; and the viscacha, answering to the various species of European hare.

5. *The Peruvian Ranges.*

The several above-described ramifications of the Andes pass from Bolivia into the domain of the Peruvian Re-

public, bordering eastward at first on Bolivia, and farther north on the Empire of Brazil. No greater contrast can well be conceived than the two neighbouring regions of the plain of the Amazons and the mountainous part of Peru—a contrast apparent as much in the conformation of the land as in its climate and natural products. The first presents itself as a spacious, hot, low-lying alluvial region, in every direction traversed by great streams, in which a countless multitude of the most varied species of fish disport themselves. It is a land covered with virgin forest, laden with luxuriant foliage and brilliant blossom, rich in resins, birds, and wild animals, but only thinly peopled with a few hordes of savage Indians, struggling for existence against a too exuberant nature.

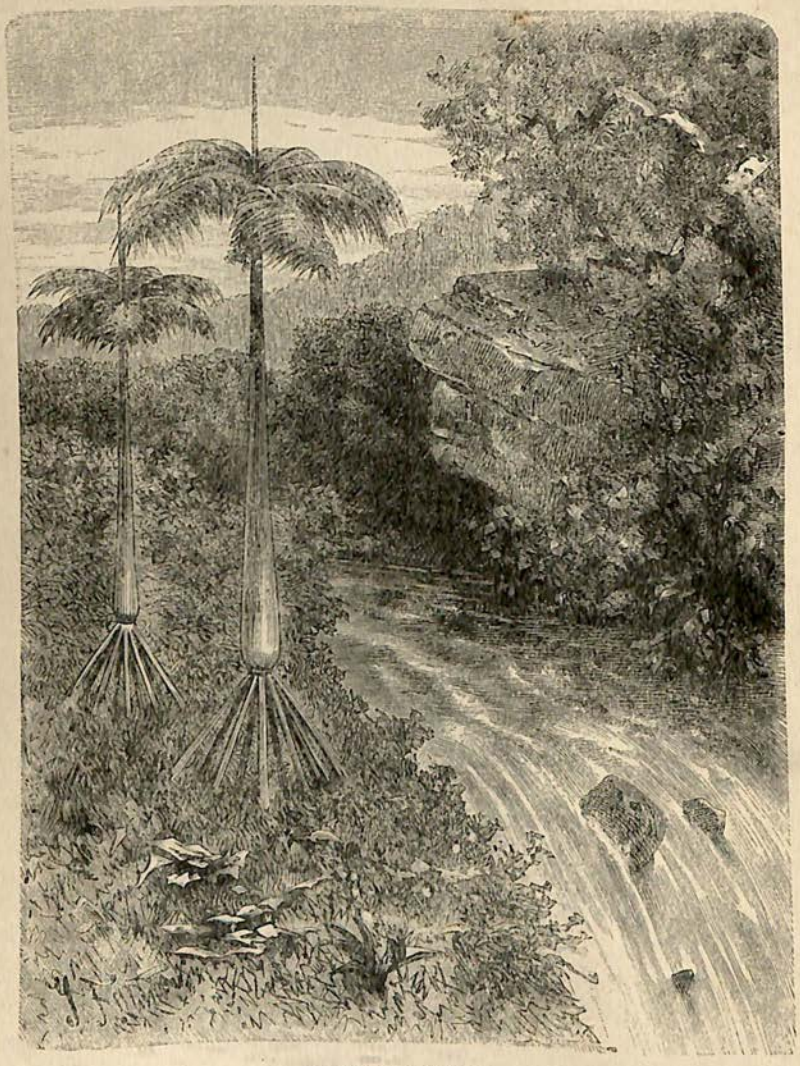
The mountainous part of Peru, on the contrary, though of less extent, presents far more varied features, and everywhere reveals the traces of a thousand historical memories. Its Pacific seaboard forms a long arid waste, at certain intervals intersected by narrow, green, oasis-like river-valleys, fertilised by the short rivers resulting from the melting of the snow on the gigantic Cordilleras, which rise to a majestic elevation at but a few miles' distance from the rocky shores of the ocean.

In these favoured valleys and plains of the coast country are situated the great cities of Arequipa and Lima. The most remarkable peculiarity of the climate in this region consists in a total dearth of rain. Long intervals of time succeed each other without a single drop falling on the thirsty soil, and showers are phenomena as rare as the appearance of a comet or an earthquake in our latitudes. Instead of the tropical rainy season, the Peruvian wastes are refreshened from June to October by thick mists, affording sufficient moisture for the growth here and there of a little verdure, which, however, is again burnt up by the rays of the sun on the first bright day.

6. *The Interior of Peru—The Montaña.*

The interior of the country presents a vast table-land ranging from 11,000 to 14,000 feet above the sea-level. Peru might with some reason be named the American Tibet. The plateau-land is bordered on one side by the great and unbroken western line of the Cordilleras, on the other by the loftier but less connected eastern chain; the snow-clad peaks, to a spectator at sea, glittering like silver spires on the eastern horizon. Here are situated the cold, sterile, cheerless, and uninhabitable *Despoblados*, and the scarcely less extensive *Punas*, at an average elevation of 12,000 feet, consisting of wretched meadow lands, whose scanty vegetation offers but meagre fare to the llama and the alpaca. Here also are situated the hill-encircled *bolsones* or closed valleys, in which we meet with the climate and products of the temperate zones, and where formerly flourished the mysterious civilisation of the Incas. Here also lie the deep, narrow, and tropical mountain gorges where the thousand head-streams of the Amazons collect their waters before forcing their way over roaring cataracts and through the dark clefts of the Andes down to the plains of Brazil. Lastly, in this elevated table-land is situated the famous island-studded lake of Titicaca, almost rivalling Lake Ontario in size, bedded in the hills at a height of 12,196 feet above the ocean-level, and to whose rocky islands has been traced back the first germ of Peruvian civilisation.

This table-land is on both sides flanked by alpine chains, sloping on the one hand towards the desert Pacific coast, and on the other towards the east, where the traveller in a few hours passes from an arctic climate down to the palm-growing temperature of the tropics. He there finds himself in the *Montaña* of Peru, a not less interesting though little-known region on the eastern slopes of the



PASHIUBA PALM-TREES.

To face page 211.

Andes, distinguished by its name from the *Cuesta* or coast, and from the Sierra or elevated table-land of the interior. And here the reader unacquainted with Spanish must be warned that this word, though strictly meaning mountain, cannot be translated by such terms as hill or range. The *Montaña* is rather a tropical wooded upland, where the old and decayed vegetation decks itself with bright twining and parasitic plants before its thundering crash breaks the death-like stillness of the primeval forest. Here are seen the most glorious growths of the tropical world—tree-ferns, the graceful bamboo, and palms, peerless amongst plants; amongst which latter may be found the strange *Pashiuba*, mounted high on its stilt-like roots. In their shade and on their branches are sheltered whole families of apes and flocks of parrots. Here also prowls the hungry jaguar, and all the land teems with humming-birds and creeping reptiles. Here grow luxuriantly the sugar-cane, the coffee plant, the cacao tree, the coca, the manioc root, and the precious *Cinchona calisaya* or Peruvian bark tree, with much shrewdness, ingenuity and trouble, stolen by Clements R. Markham in 1861 from the Peruvian forests for the benefit of suffering humanity.

7. *The Cuzco Range.*

At the northern extremity of the Titicaca table-land the western and eastern Cordilleras meet to form the mountain knot of Cuzco, the most extensive of the whole chain of the Andes. Under the 14th parallel it again divides into two branches, and again unites between the 11° and 10° S. latitude, where it forms the Huanaco and Pasco ranges. At the 10th parallel it once more forks off into three branches, of which the most westerly or coast range alone reaches the line of perpetual snow. The sheer walls of these chains are broken by narrow

clefts, forming passes occasionally as high as 15,000 feet above the sea. The three branches are again united in the hills of Loja, between 5½° and 3° 45′ S. latitude, and consequently mainly within the territory of Ecuador.

8. *The Cordilleras of Ecuador—Iliniza—Chimborazo.*

Between Loja and Pasto, and in an almost due northerly direction as far as about 1° N. lat., stretches the Cordillera of Quito, or the Andes of Ecuador, where within a narrow space are crowded together a number of the loftiest peaks of America. Here the Andes consist of two nearly parallel ranges, traversing the whole territory of Ecuador for a distance of 250 miles from south to north. Between them lies a narrow level upland valley scarcely more than from 14 to 20 miles in width, in which is situated Quito, the capital of Ecuador, within 14 miles of the equator. South of Quito is the city of Riobamba, the road leading to it forming an avenue flanked by fifty peaks on an average as high as Mount Etna, three of them emitting volumes of smoke, and all of them crowded into a space not much greater than the distance between London and Dover.

This region of almost inaccessible peaks was visited in 1879-80 by Mr. Edward Whymper, the famous Alpine climber, who, with indomitable energy, accompanied and assisted by two Swiss mountaineers, succeeded in reaching the summits of all the principal mountains, finishing by making a second ascent of Chimborazo. He made a series of careful observations with aneroid and mercurial barometers with a view to settling the height of the mountains, and added besides greatly to our accurate knowledge of their form, position, and structure.

In the western range, amongst other snow-capped summits, towers the two-peaked ice-bound pyramid of

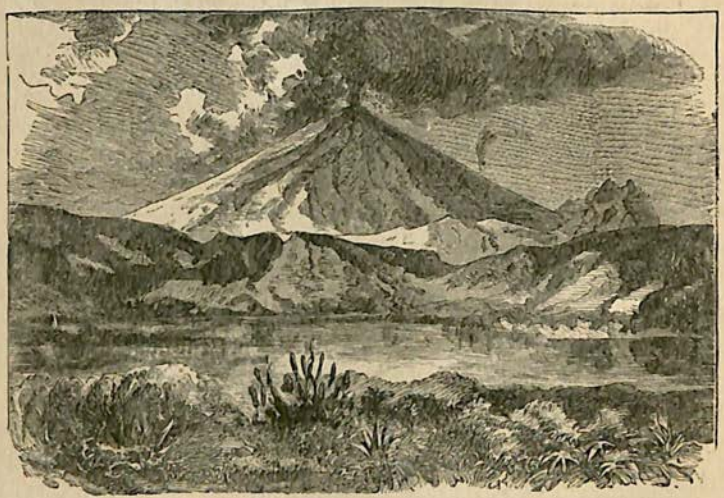
Iliniza (17,400 feet); the four-crested and glacier-forming Pichincha (15,918 feet); Corazon (15,871 feet), one of the finest snowy mountains of the Andes, distinguished by its rough precipitous sides and huge naked cliffs; Carihuairazo, terminating in many peaks, the highest nearly 17,000 feet; and lastly, separated from the preceding by a depression to the north, the "silver bell" of Chimborazo (20,517 feet), long erroneously supposed to be the highest summit not only in America but in the whole world.

9. *Tunguragua and Cotopaxi.*

Amongst the snow-clad peaks of the eastern range may be mentioned the wooded Tunguragua (16,685 feet); Capac Uru, king of mountains, by the Spaniards called the "Altar" (17,735 feet), which fourteen years before the Spanish invasion was still somewhat higher than Chimborazo, but has since fallen in, now presenting the appearance of a magnificent jagged and rocky crown, whose dark-blue "barrancas" and crevices in the dazzling snow furnish a spectacle one is never wearied of gazing at; lastly, the restless Sangay (17,460 feet), and the sublime Antisana (19,260 feet), at whose foot is the *hacienda* or inn immortalised by Humboldt's visit, at an elevation of 13,000 feet above the sea-level, that is to say, 1000 feet higher than the Peak of Teneriffe. At the same time this hacienda is not, as is often stated, the highest habitation in South America, the mining district and town of Potosi in Bolivia being situated some 200 feet higher.

The summit of Cayambe (19,200 feet) is crossed by the equator, and not far from it towers the majestic volcano of Cotopaxi, 19,550 feet high, and consequently in absolute elevation without a rival amongst the active burning mountains of the Old World. In symmetry of

shape also, and regularity of its conic form, Cotopaxi is unsurpassed not only by any South American volcano, but has no equal elsewhere except perhaps Mount Fusi-yama in Japan. *Es hecho como al torno*,—"it is turned



COTOPAXI.

out as if with the lathe," said the Spanish Creoles to Humboldt. It looks, says Orton, in his recent *Andes and the Amazon*, like a huge truncated cone rising out of the valley, its sides deeply furrowed by the rivers of mud and water which have so often been vomited from the crater. The cone itself is about 6000 feet high, its eastern side being covered with snow, whilst the western is nearly bare, a peculiarity caused by the trade winds, which, sweeping from the Atlantic across the continent, deposit their moisture in the form of snow on the side of the mountain that faces their course. The summit of this most beautiful and most terrible of volcanoes, hitherto deemed inaccessible on account of the steepness of its

sides and the depth of the ashes covering them, was reached by Whymper and his companions, who remained twenty-six hours, and therefore passed the night at this great elevation. The valiant Hall had previously tried it with scaling ladders, only to fail. Cotopaxi is slumbering now; or, as Mr. Coan says of Hilo, it is "in a state of solemn and thoughtful suspense." The only signs of life are the deep rumbling thunders and a cloud of smoke lazily issuing from the crater. Sometimes at night the smoke looks like a pillar of fire, and fine ashes and sand often fall around the base, to the great annoyance of the neighbouring farmers. On the south side is a huge rock of porphyry, called the Inca's Head. Tradition has it that this was the original summit of the volcano, torn off and hurled down by an eruption on the very day Atahuallpa was murdered by Pizarro. The last great eruption occurred in 1803; though as late as 1855 it threw forth stones, volumes of water, and sand. Heaps of ruins, piled up during the lapse of ages, are scattered for miles round the base of the mountain. Pumice and trachyte are the most common rocks around the mountain, and these are augitic or porphyroid; obsidian also occurs, although not on the immediate flanks, but farther down, near Chilo. The cone itself is evidently composed of similar beds one above the other, and holding fragments of porphyry and trachyte. What is Vesuvius, 4000 feet high, to Cotopaxi, belching forth fire from a crater 15,000 feet higher, and shooting its contents aloft to a height 3000 feet above its cap of snow, with a sound heard at a distance of 600 miles!

10. *The Guamani and the Colombian Ranges.*

On the eastern or Atlantic slopes of the Cordilleras, between Quito and the Amazons, lies the district called Del Oriente of Ecuador, watered by the great river Napo

flowing into the Amazons in Peruvian territory. A bridle-road leads for a space of 33 miles to the village of Papallacta, at first over a crest of the Guamani range, 15,000 feet high, and commanding a sweeping view of the dark wooded valleys of the Upper Amazons, thence over the bare and in parts marshy upland steppe of Paramo, and so on through Archidona to the station of Napo, still a long way from the Amazons itself. Another path, followed by Indians and traders, leads from Riobamba to Baños on the Pastaza, and thence through the interminable forest drenched by almost perpetual rain, to Canelos, whence canoes descend to the Amazons.

Pursuing the course of the Andes northwards, we meet with frequent cross ridges, connecting together the parallel ranges of the Cordilleras like the rungs of a ladder. Such ridges are Assuay in Ecuador, south of Riobamba, 14,500 feet high, and another between Quito and Ibarra, 9500 feet high.

Continuing to proceed northwards along the elevated Indian plateau between both of the main ranges, as between two parallel walls, we soon become aware of a not inconsiderable fall in the surface of the intervening valley. Quito, Ibarra, and Pasto, are situated at the respective elevations of 9521, 7314, and 8321 feet. But between the last two the ground rises again to 10,560 feet, where is situated Tulcan, the last frontier town of Ecuador, after which we enter the domain of the United States of Colombia, or New Granada as they were formerly called. Between Pasto and the town of Popayan, at an elevation of not more than 5822 feet, the road is again crossed by a ridge, forming a water-parting between the Pacific and Atlantic oceans. For this ridge leads from the hot valley of the Patia flowing into the Pacific, to the valley of the Cauca, which throughout the whole of its upper and middle course is separated by a

third, or middle Cordillera, from the more easterly valley of the Magdalena. This third Cordillera branches off from the two others a little to the south of Popayan, all three ranges being henceforth separated from each other no longer by elevated uplands, but by river valleys—that of the Cauca, and still farther north that of the Atrato, on the west, and on the east that of the Magdalena.

11. *The Tequendama Falls—Geology of the Bogotá District.*

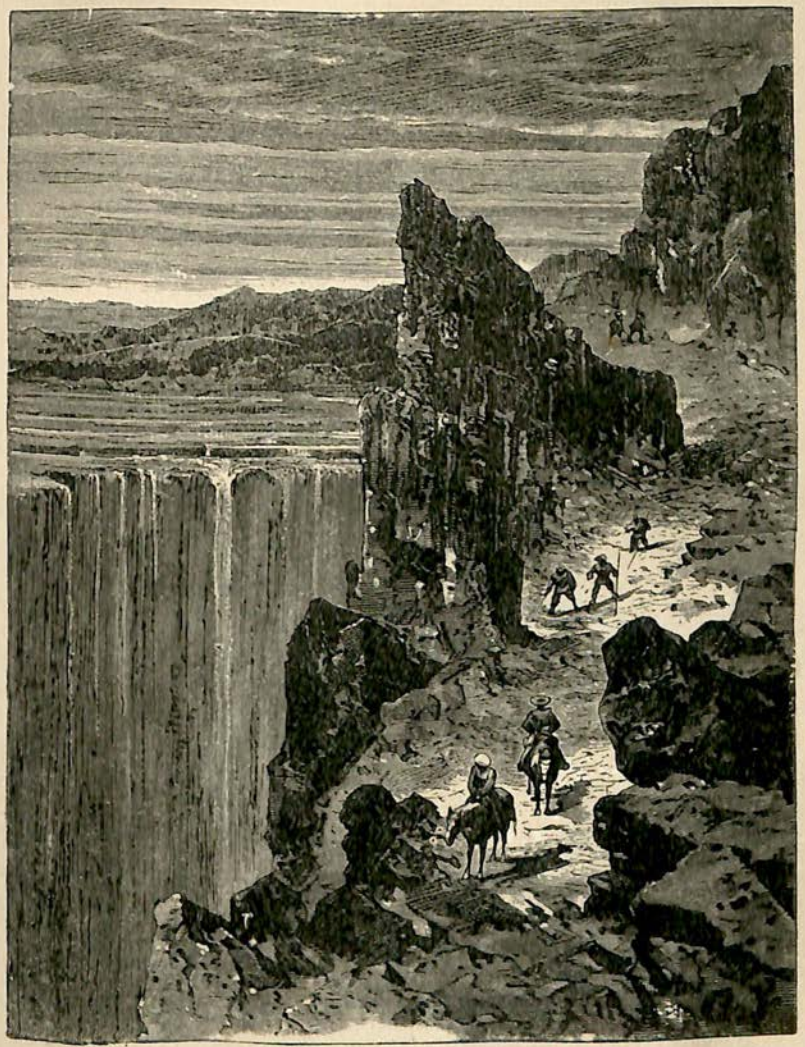
The intervening Cordillera of Quindiu again separates both of these parallel river valleys, the most easterly and also the most important and broadest of which is flanked by the lofty Cordillera of Cundinamarca. On the west side of this last, and at its foot, lies the capital of the Colombian Republic, Santa Fe de Bogotá, situated on a little detached plateau near the Falls of Tequendama, still one of the most celebrated cataracts in South America.

All the geological features of the Bogotá plain tend to show that a fresh-water lake formerly filled the basin formed by the hills encircling the town. To judge from the sedimentary deposits on the upper crust of the savannah, this lake must have for a very long period watered the slopes of Montserrate and Guadalupe. The Rio Bogotá with its numerous branches, rushing more or less impetuously into the lake, maintained its waters at this elevation in spite of the evaporation and outflow towards the south-east. But the lake itself cannot have been very deep, as the natural dam confining its waters on the south side is no more than 130 feet above the present lowest water-level at the junction of the Bogotá and Muño.

The rocks forming this dam and the gigantic wall of the lake are of sandstone, with shell fossils often very hard and schistose. The current produced by the inflow

of the Bogotá and its branches in the waters of the lake in a south-westerly direction occasioned a thick deposit of mud and a rise in the land extending from Soacha to the hacienda of Tequendama. The pent-up waters overflowed the dam and began the formation of the falls through the deep gorges of the Cordilleras. In the course of time, probably on the occasion of one of those great earthquakes which have rent the Andes asunder in so many places, the dam was burst open and the lake dried up. The powerful stream that rushed through the opening continued to cut out and enlarge its bed more and more, as is evident from a careful geological survey of the surroundings.

The Bogotá follows a winding course to a labyrinth of rocks and boulders, where it forms the Tequendama Fall. The contrast presented by the soil and vegetation at various parts of this cataract is highly interesting. The hitherto monotonous and bare level country begins at this romantic spot to form a series of many-shaped hills, all covered with a luxuriant tropical vegetation. The grasses are succeeded by thick bushes and tall shady trees. Here the river rushes in clouds of foam and mist through the rocky sides of its bed, until it reaches a deep gorge overgrown with shrubs, and overtopped with lofty trees, where it rushes headlong into the awful abyss beneath, disappearing in a cloud of mist and spray with a terrific roar, which awakens the echoes of the sequestered hill-sides. The stream reaches the ground at a depth of 580 feet, apparently in a cloud of vapour, reflecting all the colours of the rainbow, but in reality with such force that it has hollowed out a well 130 feet deep in the rock below. From this point the Bogotá, emerging into the light, winds through thick bushy and rocky banks to its junction with the Magdalena farther north.



PASS IN THE CORDILLERA.

To face page 218.

12. *Regions of the Magdalena and Atrato.*

The valley of the lower Magdalena, around which are grouped seven of the Colombian States, embraces an extensive region embedded in the heart of the land, and at last merging in the plains along the Atlantic seaboard. The valley is here overgrown with gigantic primeval forests, in which is found an immense diversity of timber useful for building purposes, besides gum-producing and medicinal tropical plants in profusion. Wherever the land has been cleared and cultivated, its marvellous fertility is unsurpassed by the richest soils in the world.

A similar physical appearance is presented by the valley of the Atrato; while that of the Cauca forms a level upland, which, at a height of 5250 feet above the level of the Pacific, is overgrown with tall grasses and uncultivated meadow lands. Its average temperature is about 77° Fahr., and its civilised population numbers 435,000. Here the land, which is exceptionally adapted for cattle-breeding, produces cacao, coffee, the sugar-cane, rice, tobacco, cotton, and indigo, not to mention bananas, maize, and potatoes, which everywhere grow in great abundance.

The junction of the Cauca and Magdalena valleys and their respective rivers renders impossible a further union of the three main branches of the Cordilleras. The western and central ranges decline in height gradually towards the north, while the eastern branch alone continues its course at a considerable elevation, in a north-easterly direction, through Venezuela, as far as the tenth degree of north latitude, that is, as far as the Caribbean seaboard. Here the Nevada de Merida attains a height of about 15,000 feet above the ocean-level.

CHAPTER IV.

THE ISOLATED MOUNTAIN SYSTEMS IN THE NORTH OF SOUTH AMERICA.

1. *The Sierra de Santa Marta.*

THE northernmost state in the Colombian Republic is Magdalena, confining westwards on the Rio Magdalena, and eastwards on Venezuela. In the west, south, and north, it is level; but in the east is situated the almost inaccessible Sierra Nevada de Santa Marta, entirely detached from all other South American mountain systems, and rising beyond the line of perpetual snow to a height of 17,500 feet above the sea-level. From the Sierra Negra, the north-easterly spur of the far inferior Sierra Perija, the Sierra de Santa Marta is separated by the valley of the Rio de la Hacha, with its numerous hamlets and other centres of population. Towards the south and south-east it descends into the Valle d'Upar, with its capital of the same name. As a proof of how little the State of Magdalena is known, and of how inaccessible is the Sierra Nevada, it may be mentioned that the Colombian government has offered a prize of £200 for any one who may succeed in making his way over the Sierra of Santa Rosa to the coast.

2. *The Region explored by Fane, Simons and Tetens.*

We are indebted for some particulars concerning the northern slopes of the Sierra Nevada to Tetens, who ascended them in 1874. About 16 miles south from

Porta Dibulla begin the first hills, which, in the relatively short space of 33 miles, rise rapidly to a height of 16,000 feet; besides some unimportant plateaus, forming a continued series of the most rugged inclines and groups of hills, rendering it quite impossible to get from any point, however high, a comprehensive view of the general formation of these highlands. Penetrating through dwarf woodlands and savannahs, Tetens reached the *rancho* of *el Volador*, 16 miles from Porta Dibulla, the road from which passes through a hilly district to the Rio San Andreas and the Rio Santa Clara, a few miles beyond which begin the upland savannahs, from 4000 to 5000 feet high, and affording a view of the Caribbean Sea.

Proceeding in a south-westerly direction, Tetens reached the Indian villages of San Antonio, on the right bank of the Rio San Antonio and Santa Rosa, the latter being the most important settlement of the Arauco tribe.

The most southern point reached by him was the Indian settlement of Mocatama, 9850 feet high, and close to the slopes of the snow-clad crests. The snowy peaks of the Sierra Nevada have, however, been reached on separate occasions by two Englishmen, one, Colonel F. Fane, who, in a holiday excursion in 1850, from the West Indies, reached them by the southern road from Santa Marta *viâ* Valencia and San Sebastian, and the other, Mr. F. A. A. Simons *viâ* Valle d'Upar and San Sebastian in 1878 and again in 1880. Neither of them, however, succeeded in climbing to the summit of the pinnacles, which form a jagged crest lying east and west above the snow-line, and the ascent of which would be attended with great difficulty. Mr. Simons determined the altitude at the foot of the culminating peaks, by means of careful observations, as 17,000, and calculated the height of the peaks above that point at 500 feet. According to Mr. Simons the tropical forest clothes only the lower slopes

of the colossal mountain mass, being most dense and luxuriant on the western side; the region above is quite bare of trees and forms a desolate moorland, and near the base of the culminating peaks are a series of lakes or tarns, sunk deep in precipitous hollows.

3. *The Three Venezuelan Mountain Systems.*

On the eastern frontier of Colombia lies the State of Venezuela, in which may be distinguished three different mountain systems—The Venezuelan Andes, that is, the above-mentioned eastern branch of the Colombian Cordillera, stretching in the direction of the Caribbean Sea; the Venezuelan coast range; and the Sierra Parime. Volcanoes are unknown in these three ranges, though earthquakes have occasionally devastated the coast country, of which that of 1812, which destroyed the city of Caraccas, is a memorable example.

The two first ranges form a long high wall separating the plains of the interior from the northern seaboard, and clearly connected together by means of the elevated plateau of Barquisimeto (2000 to 2600 feet), and the Cerro del Altar. Still the coast range must on the whole be regarded as a distinct system, presenting the remarkable phenomenon of a double parallel chain already noticed in our survey of the Andes. In accordance with the nature of the coast they run at but a short distance one from the other, at an average elevation of from 5000 to 6500 feet, and sloping abruptly towards the north, that is towards the Caribbean Sea.

The first of these ranges, averaging not more than 1500 feet in height, is situated at about 13 miles from the coast line, and in its valleys affords shelter for many cacao and sugar plantations, while the upper zones of the whole coast range, and the more expansive river valleys, grow magnificent reserves of timber, whose value must be

estimated by millions. The northern chain reaches an elevation of 9050 feet in the peak of Naiguato, while even the Silla de Caraccas, clothed with the red-flowering *befaria*, or American alpine rose, attains a height of 8630 feet.

The southern range, which is also partly interrupted, ends like the northern in low spurs facing the British island of Trinidad. While its northern slopes are entirely covered with dense virgin forests, those facing southwards show nothing but a savannah vegetation, varied in the quebradas, where water is more abundant, with lovely groves of less gigantic trees than those met with in the so-called *Montaña*. Farther to the south of the coast range are broad open plains or *llanos* stretching away to the wooded regions of the Orinoco, and affording plentiful nutriment for countless herds of cattle and horses.

4. *The Sierra de Parime.*

Before describing these llanos and regions of the Orinoco, we must devote a few words to the third of the above-mentioned isolated mountain systems in the north of the South American continent. This is the Sierra de Parime, which lies to the south of the Orinoco, in the extensive tract between this river and the Amazons, and in the south-east of Venezuela. Farther east this range is continued as an irregular congeries of hills, spreading over the interior of Guiana and along a portion of the northern frontier of Brazil. Our knowledge of these highlands is still limited, notwithstanding the admirable surveys of Schomburgk, and more recently those of Mr. C. B. Brown. As a whole they may be described as a moderately elevated table-land, from which rise hills and ridges in solitary clusters, separated from each other by richly wooded and grass-covered plains. This elevated

region, however, is of great geographical importance as forming a well-defined water parting along fourteen degrees of longitude, the southern tributaries of the Orinoco and the rivers of Guiana taking their rise on its northern slope, and the many northern tributaries of the Amazons draining its southern declivities.

Their loftiest summits fall short of the Paramos zone of the Andes, not to mention the regions of perpetual snow, and are for the most part destitute of arboreal vegetation, presenting the appearance of bare, rugged, and, in places exceedingly grotesque, mountain ridges. One of the highest summits, and at the same time the most singular in form, of this irregular range, is Mount Roraima, situated on the boundary line between Venezuela and British Guiana, and within a few miles of the Brazilian frontier. This extraordinary mountain, first visited by Schomburgk, is a huge mass of light-red sandstone rock, 18 miles in length, with perpendicular sides and a perfectly level summit, rising 7500 feet above the level of the sea. Its flanks, forming bare vertical walls in no place less than 1500 feet in sheer precipice, are inaccessible; but the level summit is known to be the source of several streams, which leap from the edge of the plateau in magnificent cascades, and flow in different ways to feed the Essequibo, the Orinoco, and the Amazons. Most of the hills and ranges in this part of the continent exhibit the same peculiar flat-topped formation; the ranges for hundreds of miles appearing as though planed down by some titanic instrument. The same pecularity is seen in the hills which border the northern shore of the Amazons in its lower course.

CHAPTER V.

THE VENEZUELAN LLANOS AND THE REGION OF THE ORINOCO.

1. *Extent of the Llanos—Their main Features as described by Don R. Paez.*

FROM the coast range of Caraccas the steppe stretches away to the woodlands of Guiana, occupying the whole region between the snowy hills of Merida and the vast delta of the Orinoco. It runs in a south-westerly direction, like an arm of the sea, beyond the banks of the Meta and Vichada as far as the unvisited source of the Guaviare, and the solitary mountain ridge of the Paramo de la Suma Paz, so named by the imaginative Spanish warriors, as if it was the fair abode of everlasting peace.

In order to realise the true character of the Venezuelan steppes or Llanos, we cannot do better than follow the guidance of Don Ramon Paez, a native of this region, who traversed the country from the little town of Macaray to the Llanos or Pampas of the Apuré, a north-western tributary of the mighty Orinoco. His road lay at first through sugar-cane, indigo, and tobacco fields, besides extensive plantations of *bucaral* (Erythrina), beneath whose shade flourishes cacao, the ambrosia of the gods, as it has been called. A small park-like district then brought him to the edge of the Galeros, a chain of hills flanking the old banks of a lake, now forming a steppe overgrown with grass.

The woods of Venezuela possess a great wealth of

noble trees, foremost amongst which is the *Vera* or *Lignum vitæ* (*Zygophyllum arboreum*), spread over the land, and especially along the coast. Its wood is so hard that it turns the edge of the sharpest tools. Very abundant is the *Guayacan*, of the same order as the vera, preferred to most others for carving and cabinet-making. Then there is the beautiful *Alcornoque*, whose shade affords the greatest relief to the cattle during the summer heats. Brazil wood also (*Cæsalpinia braziletto*) is so common that in many places all the fences are made of this valuable timber.

Through a *quebrada* or dry ravine Don Ramon reached a completely level country, which, with the exception of a few clumps of fan-leaved palms, was covered entirely with a short grass.

A dense mass of vapour pervading the atmosphere obscured the horizon, while the fan-palms, seen from afar, appeared like ships enveloped in a fog. Gradually the circle of the heavens seemed to close around the traveller, until he became, as it were, encompassed by the sky. He was treading the shores of the great basin of the Llanos, over one of the ancient terraces or *mesas*, which form the borders of these grassy oceans. For three hours he continued his ride over the *mesa* until he reached its border, which commanded an extensive view of the lower-lying savannah. The scene was at once changed into one of the most glorious panoramas in nature. At his feet lay the beautiful expanse of meadow, fresh and smooth as the best cultivated lawn, with troops of horses and countless herds of cattle dispersed over the plain. Several glittering ponds, alive with an immense variety of aquatic birds, reflected from their limpid surface the broad-leaved crowns of the fan-palms, towering above verdant groves of laurel, amyris, and elm-like *robles*. Farther beyond, and as far as the eye could reach, the undulating plain appeared like

a petrified ocean after a storm. No description could convey a faithful idea of the reality of the scene—the harmonious effects of light and shade, and the blending of the various tints of green, blue, and purple, dispersed over the extensive panorama—the gentle undulations of the plain—the towering palms gracefully fanning the glowing atmosphere with their majestic crowns of broad and shining leaves. This palm (*Copernicia tectorum*) is a real treasure to the inhabitants of the steppe, and it receives various names according to the uses it is put to. Thus, by the cattle-farmers and settlers it is called the "thatch-palm" (palma de cobija), because they employ its leaves in thatching their *ranchos;* to the straw-hat makers it is known as the "hat-palm" (palma de sombrero); and by travellers on the steppe it is termed the fan-palm (palma de abanico), from the use to which they put it as a fan to keep off the flies during a journey. The most beautiful tree of the Llanos, however, is the *saman*, a kind of mimosa, growing in profusion along the banks of the Apuré and other rivers, which expands aloft, like a gigantic parasol, its crown of delicate feathery foliage. Extensive tracts of land are entirely taken up by this species of tree, and it is impossible, says Don Ramon, to conceive anything more grand in nature than these forests. All along the course of the great rivers Apuré, Guarico, and Portuguesa, the saman is found in such countless numbers that the combined fleets of the whole world might be reconstructed from this inexhaustible supply of timber. Equally rank and luxuriant are the grasses in these alluvial lands. Amongst the curious varieties is the *gamelote*, a tall, cutting, and worthless grass, with blades almost as sharp as a Toledo rapier. It grows so closely and rapidly as to obliterate in a few days the paths made by travellers, killing every other species in its way. Unfortunately for the settlers, it is perfectly useless as fodder, except for

chiquires or water-hogs, which feed on it when nothing better offers, and to the flesh of which it imparts its disagreeable flavour. On the Llanos of the Apuré a singular phenomenon presents itself in the *medanos*, or ranges of low sandhills, which are formed by the loose sand blown by the wind over the boundless plain. They are continually changing, to-day rising above the surface of the surrounding prairies, to-morrow levelled with the dust of the savannahs. But in one district the sandhills, having been overrun by the *gamelote*, which has consolidated the loose masses by its roots, have become a low range of permanent hills, and are called the Medanos de San Martin. This objectionable kind of grass appears, however, to prefer the higher parts of the plain; on the savannahs of the Apuré a luxuriant growth of more tender and succulent kinds characterises the verdant prairie. Some of these grasses are as soft and pliable as silk, and it is owing to the nutritious qualities of the pasture in general that the alluvial plains of the Apuré and its tributaries have become so noted for cattle-breeding. In the upper levels of the Llanos the farmer is compelled to migrate with his stock every summer; on the Apuré the grass is verdant all the year round. Three of the varieties are especially remarkable. One, the *granadilla*—a grass reaching to about four feet in height, with tender, succulent blades, and panicles of seed not unlike some varieties of broom corn—starts with the earliest showers of spring. It grows with great rapidity, and is greedily sought by all ruminants; but, being an annual, it soon disappears, leaving no vestige of its existence. The second is the *carretero*, so named from the beautiful prairie-goose that feeds on it. It has an uninterrupted growth and luxuriance, which the hot season cannot blast, and grows in the alluvial bottomlands subject to the periodical inundation. The third—perennial like the preceding—is the *lambedora*, so termed

on account of its softness, animals feeding on it appearing to lick rather than masticate it. Cattle and horses thrive on it very perceptibly, and even calves only a fortnight old may be left to shift for themselves amidst these nutritious pastures.

Esteros is the name by which these perennial meadows are designated in Venezuela. The pools and channels of water in these regions of plenty do not dry up in the dry season, and they are consequently the resort of a multitude of quadrupeds and water-fowl. The birds in particular seem to have migrated thither from all quarters of the continent. These prodigious congregations of the feathered tribes are known in the country under the name of *garzeros*, from the many *garzas* or herons predominating in them. The colonies of these birds sometimes extend for several miles. One of the kinds of crane is called the soldier, from its erect bearing and martial air, and is over five feet in height, with a bill fully a foot long. The herons, storks, and ibises are of various sizes and colours, some snow-white, some a delicate blue, others grey or pink, and many a brilliant scarlet. They generally select the spreading top of a low tree, the *caujaro*, growing in vast quantities near the water, in which to build their nests, which are of dry sticks very ingeniously interwoven among the branches. Well-beaten tracks are made under the bushes by the tramp of many suspicious characters of the feline tribe, who make these feathered colonies their favourite resort, and profit by the opportunities of appropriating young birds which fall from their nests. The pools are also the resort of myriads of small ducks, of a kind called *guiriri*, which, when they are disturbed, rise in such incredible numbers as actually for the moment to obscure the sun. They utter a shrill note, resembling the syllables "gui-ri-ri," whence their name is derived, so that the hunter easily discovers their whereabouts. Besides

these, there are great numbers of a larger duck, the *pato real,* or royal duck, so named probably from a graceful tuft of black feathers with which it is crowned. Here and there a brace of *carreteros* are seen soaring overhead, uttering their peculiar rolling notes; the hoarse quacking of the male bird, followed by the shrill cries of the female, making a perfect resemblance to the rumbling of cart-wheels. During the moulting season, the people in the neighbourhood of these lagoons resort to them from time to time, and drive without difficulty towards the farm-house as many of these ducks as they may desire.

This prodigious exuberance of animal life has justly entitled the Apuré to the reputation of being a land of plenty. But it has also its dark side, in the number of noxious species which it cherishes, and in the miasmas which are exhaled from its extensive marshes, which at certain seasons of the year render this fine country almost uninhabitable for man. These marshes are the abode of the enormous water-snake, the anaconda, known in Venezuela under the name of *culebra de agua;* and the woods harbour the boa-constrictor, termed *traga venado* from the ease with which it gorges itself with a whole deer at one time. Besides wild animals, such as deer, capybaras, and so forth, these great snakes cause havoc among the herds of the Llano farmers; calves, heifers, and colts falling an easy prey should they incautiously step into these treacherous pools. The noxious exhalations of the marshes are injurious to health only in the rainy season; during the dry season strong breezes prevail, which clear off the moisture from the low grounds, and nothing but the recklessness with which the inhabitants expose themselves, prevents them from enjoying perfect health during this delightful portion of the year. The jaguar is common in many parts of the Apuré district, and alligators swarm in the rivers; besides which, numer-

ous venomous snakes of various species, including the rattlesnake and the dreaded *lachesis*, lie concealed by the side of pathways in meadows and thickets. The vegetable world has also its subtle dangers in the shape of poisonous herbs and trees. Most common of all is the *Guachamacá*, belonging to the family *Apocyneæ*, or Dogbanes, a group of plants especially distinguished for its fatal qualities. The poison of the Guachamacá is so powerful that meat, roasted on spits made from the wood, absorbs poison sufficient to cause the death of all who partake of it. Lastly, the waters of the Llanos furnish their quota of obnoxious creatures, besides the delicious fresh-water turtle and numerous kinds of edible fish. First of all is the sting-ray, which is armed near the end of its tail with a spine several inches long, with which it can inflict a painful wound in the foot of the incautious bather. Next to this is the grotesquely-shaped fish, the *payara*, the upper jaws of which are furnished with a pair of fangs similar in shape to those of the rattlesnake; and the less dangerous electric eel, which abounds in the slimy bottoms of still pools, and is able to administer a stunning shock to horses, especially when entering such pools to quench their thirst. Worst of all is the last we shall mention, the fish called *caribe*. It resembles in general form the gold-fish, but is a little more corpulent, and has a truculent-looking bull-dog head, with projecting lower jaw. With its powerful and sharp three-edged saw-like teeth it is able to bite in two a strong steel fish-hook; and he seems to scent blood from afar, judging from the shoals which will rapidly congregate round a wounded animal in the water. Even the armoured alligator is not secure against this redoubtable pest of Venezuelan rivers, for when blood is drawn in the frequent contests which occur between the males of these formidable reptiles, vast multitudes of the caribe rush in

and enlarge with their voracious teeth the wounds that have been opened. Besides alligators, there is a species of the true genus crocodile in the waters of the Orinoco. Another common animal on the Llanos is the wild hog, which is not an indigenous species, but the common domestic hog run wild. It occurs in vast numbers in some parts of this great region, and causes at times great damage to the farmers by tearing up the soil in the best parts of the pasture land, destroying the nutritious grasses, and causing a rank and useless vegetation to spring up in their place.

2. *The Region of the Orinoco.*

The above-described Llanos extend to the wooded regions of the Orinoco, the main stream of Venezuela, with its western affluent the Meta, which form together a magnificent and important water highway, navigable for steamers and sailing vessels all the way from the Atlantic Ocean to the Colombian Cordilleras. This great river is especially suited to form a commercial route, by the fact that the trade winds prevail inland as far as San Fernando, enabling sailing craft, though slowly, to make head against its downward current.

3. *Source and Course of the Orinoco.*

The Orinoco rises in the unexplored mountain system of the Sierra de Parime, though its source has never yet been seen by a European eye. Its first known southern tributary is the Rio Padamo, abounding in cascades and rapids. From the junction of this river to the town of San Fernando de Atabapo the Orinoco pursues mainly a north-westerly course, a little below Esmeralda throwing off to the left a broad and navigable channel, the famous Casiquiare, which flows into the Rio Negro, a northern

tributary of the Amazons. In this way the basin of the Orinoco is so far connected with that of the Amazons. At San Fernando de Atabapo, where it is joined by the Guaviare rushing down from the Colombian Andes, the Orinoco changes its north-westerly for an almost due northerly course, while at its confluence with the Apuré it again turns to the right, flowing in an easterly direction for the rest of its length. As in the case of the Mississippi, the more recent upheavings of the land have turned the waters of the Orinoco from the Andes, away to the older formations of the Sierra Parime. Hence it is that this river, so singularly remarkable for its tortuous windings, sweeps completely round the Sierra Parime, while flowing close under the slopes of this range.

4. *The Middle Orinoco—Its Falls and Affluents.*

In the section between San Fernando de Atabapo and its junction with the Apuré, which may be taken as its middle course, the Orinoco receives on its left bank upwards of a dozen very considerable streams from the west, but on its right, or eastern bank, no contributions of the least consequence. On this same section are situated the waterfalls of Maypures and Atures, immortalised by Humboldt's description, and assuredly the most interesting of the countless cascades and cataracts which form such a general feature of most of the northern rivers of South America.

The most important of the above-mentioned western tributaries of the Orinoco are the Rio Meta and the Rio Apuré. Both these great streams flow through the vast grassy plains already described, reminding one of the prairies of Kansas and western Missouri. The Meta has been ascended by steamboats to within sixty miles of Bogotá.

5. *Orinoco Scenery.*

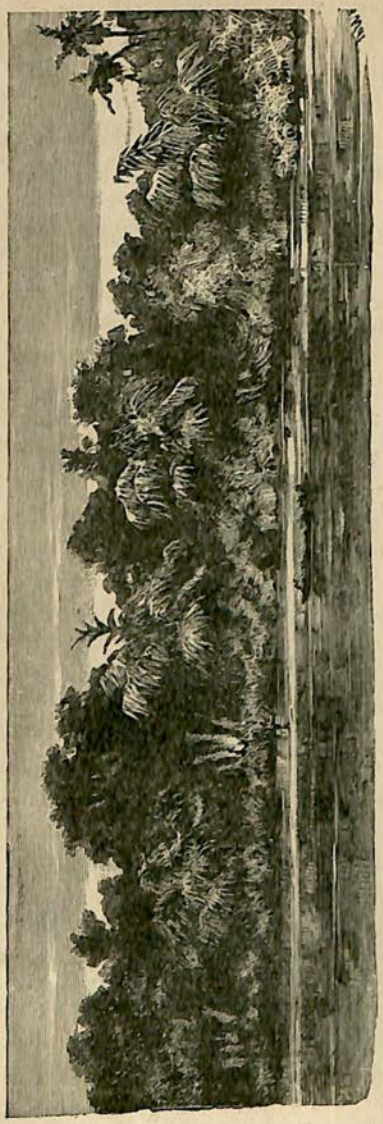
The lower course of the Orinoco, which begins at its junction with the Apuré, is thus described by a recent traveller:—"Right and left of us lay, at some distance off, the low banks of the Apuré, at this point quite a broad stream. But, before us, the waters spread out like a wide dark flood, limited on the horizon only by a low black streak, and here and there showing a few distant hills. This was the Orinoco, rolling with irrepressible power and majesty seawards, and often upheaving its billows in the storm, like the ocean when lashed to fury by the wind."

The banks of the Orinoco along its many windings are fringed with magnificent forests, casting their shadows far across the stream on both sides. During the rainy season its waters rise above the edge of these woodlands, covering the trunks of the trees, and often laying bare their upper roots. Amidst the rich and varied foliage are everywhere conspicuous the thick and leatherlike leaves of such plants as flourish only beneath the bright skies of the tropical world, and the glorious crowns of leafage never lose that freshness and luxuriance which is assumed by northern woodlands only in the lovely season of early spring. Hence the darker tones, blending with occasional patches of light from time to time, develop a play of colours of marvellous effect, and which the eye never wearies of gazing upon. Countless creepers twine themselves round the stems and branches of the trees, forming here and there dense masses of foliage impenetrable to the keenest sight, and not unfrequently decked with the loveliest and most dazzling colours. In many places we light upon bowers and natural groupings, with a wealth of beauty, and even a symmetry, which could scarcely be imitated by the most consummate art.

6. *The Lower Orinoco.*

The banks of the river in its middle course present, however, only a scanty clothing of trees, and the woodlands are not met with in all their glory and perfection till we reach the marshy region where the delta begins to form; for the Orinoco is one of those rivers that have created an extensive delta, and like most of them is blocked by a sea bar, formed by the sand and soil brought down and slowly deposited by the strong current of the river at its mouth. This sandbank, however, must be crossed before we can get access to the only one of its many branches that is navigable.

Through this delta, when the stream is low, the tide makes its way up as far as Angostura, while the Orinoco sends a current of fresh water far into the ocean, its waters, generally green, but in the shallows milk-white, contrasting sharply with the indigo blue of the surrounding sea.



ON THE AMAZONS.

CHAPTER VI.

THE REGION OF THE AMAZONS.

1. *Main Divisions of the Amazons.*

FROM the entangled network of the Orinoco we naturally pass on to the wide-branching water system of the Amazons, the mightiest river in the world, known also as the Marañon, and by the natives named the Paraná-tinga, or Paraná-uassu.

The vast plain watered by this imposing stream may be divided into three sections, each presenting some features peculiar to itself. The first of these sections may be described as the region of the delta, forming a triangle measuring some 150 miles each

side; the second would comprise the region of the Lower Amazons for a length of about 500 miles; and the third—constituting the whole upper course of the river—a wooded plain 1200 miles long by 800 broad.

2. *The Amazons Delta.*

The region of the Delta has but a slight elevation above the sea-level. According to Bates (*Naturalist on the River Amazons*), it differs from the deltas of most other great rivers—such as the Mississippi, the Ganges, and the Nile—in not being wholly an alluvial formation, the great island of Marajó, constituting its central portion, together with the bordering land to the north and south, having a rocky substratum. A vast extent of country, lying immediately contiguous to the inland apex, is, however, of truly fluviatile origin, being formed of the sediment deposited during long ages by the turbid waters of the mighty stream. This alluvial plain is everywhere traversed by channels and creeks, all of fresh water and of the most varied character; some narrow as canals for scores of miles, others expanding into spacious lagoons and bays, but mostly deep and navigable. Whilst the seaward portion of the island of Marajó is open savannah, and possesses generally a sandy soil, these more inland plains of true delta formation are clothed with the lofty and impenetrable forest growth which distinguishes all the low-lying tropical lands of South America. The channels and bays receive a number of tributary rivers flowing from the interior of the continent, the lower courses of which, as well as the channels and creeks themselves, have no proper downward current, but ebb and flow with the tide. Nearer the sea the creeks are fringed with a growth of mangroves (*Rhizophora mangle*); but this sombre tree does not monopolise the domain, as in other tropical rivers, but is relieved by groves

of swamp-loving palms, and the arborescent arum with its head of large shield-shaped leaves. In the dry season these umbrageous plains are traversible on foot by the hunter, or the indiarubber or oil-nut gatherer; but in the rainy season, when the great rivers are all pouring down their augmented volumes of water, the inundation spreads over nearly the whole land, especially during the hours of high tide. Away from the straightest and deepest of these channels, which have now become the highway for the numerous steamboats plying between Pará and the main Amazons, there are hundreds of miles of sequestered creeks, lakes, and streams, where the wanderer may paddle about for weeks together, under the shade of overhanging trees, in his palm-decked canoe, without meeting with traces of human existence, beyond a hut here and there, used by the indiarubber collector during the season when he resorts to these solitudes. Chief amongst the giant vegetable growths of this sylvan domain are the palm-trees, which exist in great number and variety. Some of the species, such as the fan-leaved *Mauritia*, with its erect columnar stems 80 feet high, bearing aloft a massive crown of enormous fan-shaped fronds, occur also in the Delta of the Orinoco, and in other parts of tropical America; but other forms equally striking are seen nowhere but here; such are the *Ubussú* palm, with its large undivided rigid fronds, arranged round its short stem like the feathers of a gigantic shuttlecock, and the *Jupatí*, which radiates its loosely fringed leaves, each 50 feet in length and 6 feet broad, in graceful arches over the water. With the exception of the fan-leaved species none of the palms form extensive groves of themselves; they are mingled with the masses of more ordinary-looking forest trees which constitute the prevailing feature of the woodlands. The warm moist air of this well-watered region, situated so near the equator, and aided by the rich alluvial

CAMPING-GROUND ON THE AMAZONS.

To face page 238.

soil, stimulates vegetable growth to the utmost, and under its influence thousands of creeping and climbing plants overrun the giants of the forest, and their infinite diversity of flexible stem, foliage, and flower, forms a striking feature along the walls of forest which border this interminable network of creeks.

The forest growth thus described extends over the whole of the islands and southern mainland of the Pará river, as far as the interior of Maranhao. For hundreds of miles in those directions there is no interruption to the leafy wilderness, except by rivers.

The accounts of travellers dwell frequently on the stillness and sombre awfulness of these primeval woodlands, and not without reason, for such impressions are fully confirmed by a lengthened abode in these regions. The far too rare voice of the feathered tribes is of a melancholy and mysterious nature, calculated rather to quicken the sense of loneliness than to gladden and animate the wayfarer to fresh efforts. At times there echoes in the midst of the deep silence a sudden shriek of anguish or alarm, for a moment arresting the beat of the heart. It is the cry of some luckless herbivorous creature that has unexpectedly fallen a prey to some member of the feline order, or become entangled in the coils of a boa-constrictor. Morning and evening the numerous apes of the "howler" tribe set up a horrible din, increasing tenfold the inhospitable character of the forest. And often the dead stillness of noon is broken by a sudden crash, dying away in the distance, caused by some huge branch, or even by a whole tree, falling to the ground. Nor is there any lack of strange noises, baffling all attempts at explanation. At times a sound is heard resembling that of an iron bar beaten against some hard or hollow block, at others like a piercing shriek rending the air. But neither the dull sound nor the shrill cry is repeated, and the return

of perfect stillness enhances the harrowing effect produced by its momentary interruption.

3. *The Lower Amazons.*

Emerging on the main river, below the mouth of the Xingu, we soon arrive at what we have termed the section of the Lower Amazons. Here a different scene presents itself. The waters are no longer still, or swayed too and fro lazily with tide, but a broad turbid yellow river, seldom seen (on account of islands) at its full breadth of five to seven miles, is seen tearing down with resistless sweep to the sea, bearing in the thread of its current a long line of uprooted trees, and islets of aquatic plants which have been torn from the banks.

The banks of the river and islands are generally low and clayey, and fringed everywhere with a line of dead, fallen trees; but beyond this lowland are seen ranges of hills, which mark the limit of the Amazons valley. On the north or Guiana side these hills extend with very little interruption for three hundred miles; but on the south they approach the banks of the river only at rare intervals. Characteristic of the Lower Amazons are the wide stretches of open savannah which occur on both banks. These savannahs, unlike the Llanos of the Apuré, generally possess a coarse sandy soil which supports a growth of grasses of a harsh and innutritious quality. But patches of forest are scattered here and there, and the banks of all the numerous streams are richly wooded. As we travel westward these comparatively barren, gently-undulating, sandy prairies gradually merge into a succession of plains of a more fertile and luxuriant character. Instead of sand the soil is a rich black alluvium, formed by the partial drying up of a series of broad back-channels of the giant river. Continually in the course of ages the Amazons, like other

rivers, has altered its course, now to one side, now to the other of its alluvial plain, and the courses of the forsaken channels are now marked by chains of shallow lakes, and long stretches of grass-land yielding a most nutritious pasture, and having all the characteristics, except unhealthiness, of the cattle plains of the Apuré already described. The great Amazonian forest, which spreads for hundreds of miles over the Delta and adjoining regions, and which is largely interrupted by the sandy savannahs of the lower Amazons, here begins again to prevail. It already occupies by far the greater portion of the surface, and farther west monopolises entirely the ground, to the entire exclusion of prairie.

4. *The Upper Amazons.*

Passing the mouths of the Madeira and the Rio Negro, we arrive at length in the boundless wooded plain of the Upper Amazons, here by the natives called the Solimoens. For more than 2000 miles of its course the mighty stream flows through Brazilian territory, and for 1200 miles beyond the Brazilian frontiers it continues to be navigable in Peruvian domain, here receiving the contributions of considerable tributaries, such as the Napo, Morona, and Pastaza on its left, and Ucayali and Huallaga on its right bank. All these rivers are navigable by steamers as far as the first elevations of the Andes, thus affording a ready means of communication with the districts of Peru and Ecuador lying to the east of the Cordilleras. The great forest of the Amazons is absolutely uninterrupted, except for the rivers, throughout the whole of this region—a tract of level country, better watered than any other land on the earth, measuring some 1200 miles from east to west, and 800 from north to south. Many of the nineteen principal affluents received by the

Amazons within the limits of the Brazilian dominions are also navigable by steamers, so that in Brazil alone the main stream and these tributaries present a total waterway of no less than 25,000 miles available for steam navigation. All the affluents of the Upper Amazons have the same character. Unlike the tributaries both from the north and south on the Lower Amazons—which form cataracts in descending from the high lands of Guiana and Brazil respectively, within one or two hundred miles from their mouths—the great affluents of the Upper Amazons (excluding the Rio Negro and the Madeira which are also interrupted by cataracts) flow in exceedingly winding courses and with slow currents through plains, and are free from obstructions to navigation up nearly to their sources.

5. *The Tributaries of the Amazons—The Tocantins.*

Amongst the tributaries of the Amazons there are some important enough here to challenge special attention. Those flowing from the south to its right bank are naturally all the more important, inasmuch as they form water highways into the interior of Brazil, and especially the provinces of Goyaz and Matto Grosso, lying relatively near to Rio de Janeiro, hitherto the chief centre of trade. One of the foremost of these southern affluents is the Tocantins, 1600 miles in length, discharging its waters by a mouth ten miles broad almost under the equator, a little above the town of Pará in the Delta, into the river Pará as the southern branch of the main stream is called. The Tocantins does not, strictly speaking, belong to the Amazons system at all, forming rather a special hydrographic unit in itself. It comes directly from the very heart of the great province of Goyaz, and traverses that of Gran Pará. Its rocky shallows

and falls, which commence unfortunately at about 100 miles from its mouth, are represented as being capable of easy removal, whereby the river would become navigable for large steamers. Its principal affluent is the Araguay, which was carefully explored in 1864. It rises somewhere about the 18th degree of S. latitude, on the Serra Cayapa, in its course northwards forming the boundary between the provinces of Matto Grosso and Goyaz, here flowing through an exceptionally fertile, though still little peopled, country, and after a course twice as long as that of the Rhine, discharging into the Tocantins under the 6th parallel of S. latitude. Dr. José V. Couto de Magalhaes navigated the Araguay for a distance of about 1380 miles, struggling all the time with endless troubles, difficulties, and natural obstructions of all sorts. He was however able to convince himself that for its whole course this most important stream is as navigable as the lower reach of the Tocantins itself.

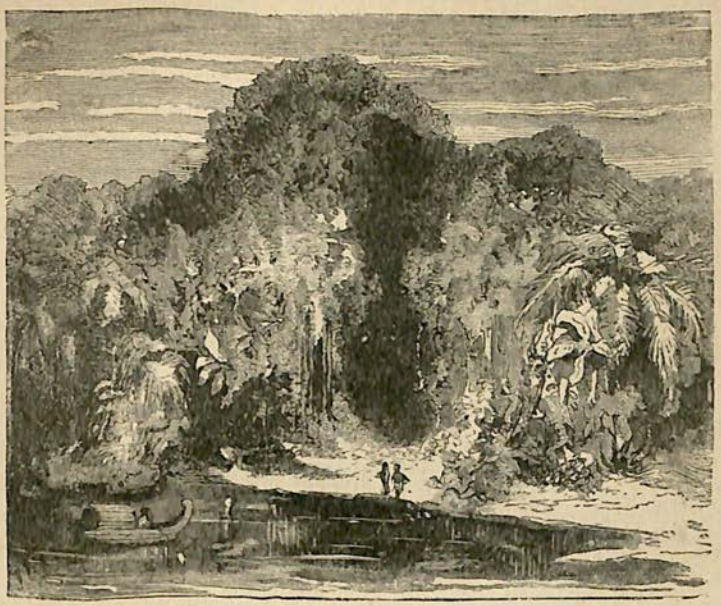
6. *The Xingu, Tapajoz, Madeira, Purus, and Jurua.*

The next tributary on the southern bank is the Xingu, a stream 1200 miles in length, little visited and almost unknown. Somewhat less considerable, though still important, is the Tapajoz or Arinos, which rises on the northern side of the Campos dos Parecis, near Cuyabá, and after a course of 1000 miles discharges into the Amazons at Santarem. In its upper reaches it receives numerous tributaries, but this river basin is still but little known. Below its last falls (100 miles from its mouth) it rapidly expands, becoming, before its junction with the Amazons, a gently-flowing stream, eight miles broad and without islands. The easterly trade-wind, which blows up the Amazons throughout the dry season, is here deflected into a northerly breeze, and attains great strength, raising a heavy sea dangerous to boat navigation.

The Madeira is unquestionably the most important of all the tributaries of the Amazons, with which, after a course of 2000 miles, it effects a junction a little below the point where the main stream is joined by the Rio Negro from the north. The Madeira is formed by the union of the head streams Guaporé-Itenes, Mamoré, and Beni, which water an extremely fertile district in Bolivia. At San Antonio, 600 miles from its mouth, its navigability is interrupted for a distance of 240 miles by a series of reefs, rapids, and falls; but below San Antonio, and for several hundred miles above the rapids, its navigation offers no further obstacle.

The next great southern tributary is the Purus, which, though surpassed in volume of water by the Rio Negro and the Madeira, is navigable to a much greater distance than those rivers. Its course lies wholly within the great forest plain of the South American interior, and it does not appear to receive any important tributary from the Andes. Chandless, the courageous and skilful explorer, navigated and mapped the river for a distance of 1847 miles from its mouth. Its affluent the Aquiry is also a large river, though in length and breadth inferior to the main stream. The forests through which all these streams flow are thinly peopled by small tribes of wild Indians.

Another southern tributary of the Amazons within Brazilian territory is the Juruá, surveyed and mapped by Chandless for a distance of 980 miles from its mouth. It is less by one-half in size than the Purus, though resembling this river in its main features, especially in the excessively tortuous course of its bed, all these rivers meandering in short abrupt bends through the alluvial plain. Of the next river, the Jutahy, very little is known. The last southern tributary, the Javary, forms in part the boundary between Brazil and Peru.



ON THE RIO NEGRO.

7. *The Rio Negro—Morona and Ucayali.*

North of the Amazons the Rio Negro, with its affluent the Rio Branco, presents undoubtedly the most considerable water system, and, as already stated, is connected with that of the Orinoco by means of the Casiquiare. However, it is for the present of but little commercial importance, the Indians alone driving a trade in produce and articles of their own manufacture along this channel of inter-communication between Venezuela and Brazil. It forms a striking contrast to the main Amazons, in the dark-brown colour of its waters, and the sombre aspect of the forests through which it flows; the Amazons having clayey-yellow water, and being distinguished by

the prevailing bright-green colour of its bordering woodlands.

But the first important stream flowing into the Amazons on its left bank, after it has cleared the Manseriche rapids, is the Morona, rising in the Republic of Ecuador, on the eastern slopes of the main range of the Andes. Its volume of water is considerable, its gentle flow indicating unusual depth and answering for its navigable character.

There remains to be mentioned the Ucayali, the largest tributary of the Upper Amazons, flowing through the Montaña or wooded plains of eastern Peru, and formed by the union of the Pachitea, Tambo, and Urubamba or Vilcamayu, themselves streams of no little importance, partly navigable, and flowing through fertile and wooded districts. The Ucayali has some claim to be considered the main stream of the Amazons, being 320 miles longer than the corresponding upper part of the trunk river, and having the same colour and character of water. It is navigable by the Pachitea branch to within 325 miles of Lima, and *vid* the Urubamba to within a short distance of the city of Cuzco.

8. *The Tras-Andina.*

The region of the Upper Amazons and its affluents, known as the "Tras-Andina" or "Montaña" country, notwithstanding its great botanical wealth, was never taken formal possession of by the Spaniards. A great portion of it was left in the hands of the savage natives till towards the close of the last century, nor did the Peruvian Republic direct its attention to the Montaña till the year 1853. (Lieutenant Juan Salaverry, "Navigation of the Upper Amazons and its Peruvian Tributaries," in *Ocean Highways* for October 1873, pp. 265-271.)

9. *Vast Extent of the Amazons Water System.*

All that we read and hear of the vast size of the Amazons and its affluents, conveys little or no idea of the boundless extent of this prodigious river system as a whole. One must have lived for months in these regions in order to realise how greatly the liquid element here predominates over the land. This labyrinth of streams is not so much a vast network of rivers as an inland fresh-water sea filled with islands. It has been termed indeed the Mediterranean of South America, for not only is the main river broad, deep, and navigable by large vessels at every season of the year, but hundreds of tributaries, and numberless side branches, connected with lakes scores of miles in circumference, add their quota to the great sum of navigable waters.

10. *Its peculiar Fauna and Flora—Creeping Plants.*

In truth the valley of the Amazons might with almost equal propriety be termed a water as a land basin, so that from this point of view there is nothing surprising in the fact that here the forests swarm comparatively less with life than do the rivers. Nevertheless the primeval woodlands through which the Amazons and its tributaries flow, are no less remarkable for their peculiar fauna than they are for the special character of their glorious vegetation. The dense and lofty virgin forest, next to the wilderness of waters, is the most distinguishing character of the region. Nowhere on the earth is there so vast and continuous an extent of arboreal growth. With the exception of a few miles of road in the vicinity of the large towns, with difficulty kept free from the encroachment of young vegetation, this forest is without path and impenetrable. Singular especially is the tendency both of plants

and animals, in this world of trees, to assume the character of creepers and climbers. This disposition, forced upon them by their surroundings, is shared in by many species of the vegetable kingdom which, generally speaking, do not belong to the trailing or climbing orders of plants. The most common instances are afforded by the leguminous, jasmine, nettle, and similar families. There is found even a twining palm-tree, which species is in the Tupi language named the Jaçitara. On the other hand, such trees as do not creep grow to an unusual height, and are in all directions entangled and entwined by the woody and twisted stems of the climbers. Large trees and plants of parasitic growth everywhere interlace their matted foliage in inextricable confusion, visible only at a considerable elevation from the ground. Of these creepers many unite together in the form of cables, composed, so to say, of several strands, while the stalks of others are twisted in a thousand ways, coiling like snakes round the nearest trunks, and forming gigantic folds about their thick branches; while others again trail along zigzag fashion, or else shape themselves like the steps of a ladder leading to a dizzy height above. The flowers and fruits of the forest trees are all to be sought for in the leafy domes far above, where the crowns of the trees, locked together, are exposed to the light and heat. All below is dark, musty, and cavern-like, and neither flowers nor green herbage variegate the damp ground.

11. *Climbing Animals—Reptiles.*

The same climbing propensities are exhibited by the fauna of these regions. It should, however, be remarked at the outset, that the animal kingdom is here far less numerous, as far as individuals are concerned, than might be at first supposed. It includes a number of mamma-

lians, birds, and reptiles, but they are very thinly scattered over the land, and all shun the approach of man, of whom they betray great fear. In this expansive and uniformly wooded country animals are abundant only in certain favourable and attractive spots. Brazil is poor in large land mammals, nearly all the species being of small size, forming no feature in the landscape, and mostly living in the trees. All the numerous species of the monkey tribe in the Amazons region, or rather in the whole of South America, are climbers, and, with the single exception of one genus, are never seen on the ground. The reptiles and insects do not multiply in the primeval forests to such an extent as one might imagine. Venomous reptiles are no doubt numerous in certain places, but this is far from being the case generally, and the snakes of the forest for the most part belong to the harmless genera. The repulsive sucuruju, or water-boa (*Eunectes murinus*), is more to be dreaded than the snakes of the woods, always excepting those that are really venomous, such as the *Jararaca* (*Craspedocephalus atrox*) and others. The boa-constrictor grows to a large size, and in the rainy season is so numerous that specimens, wandered from the forest, have sometimes been killed in the streets of the towns.

Amongst the most common and remarkable serpents are the ring-snakes, a harmless species akin to the European slow-worm, and haunting the underground galleries of the saüba ant. Lizards occur in great variety; one large group, the geckos, with their curious feet, adapted for climbing, frequenting the trunks of trees; and tree-frogs exist in vast number and variety.

The rarity of mosquitoes, at least on the lower parts of the river, and on most of the tributary streams; the relative coolness of the temperature; the general healthiness of the climate; the manifold and eccentric forms

assumed by the vegetation; the delicious shade; and solemn stillness,—all these combined impart a peculiar charm to these wild solitudes. Some idea may perhaps be formed of the general appearance of the woodland landscape in the low-lying regions of the Amazons, if we imagine the usual vegetation of a European conservatory spread in profusion over hundreds of miles of humid country.

CHAPTER VII.

THE INTERIOR OF BRAZIL.

1. *Still but little known.*

THE topography of the vast region forming the Empire of Brazil is unfortunately still very imperfectly known. In the interior of the country there are even now large tracts never yet visited by the white man, to say nothing of scientific explorers. And yet, during the last few decades, research has been busy here no less than in other unfrequented regions of the globe. The domain of the Upper Amazons especially has, in recent times, received much and varied light from the labours of diligent explorers and naturalists.

But the central provinces of Matto Grosso and Goyaz, and Minas Geraes, nearer the east coast, have been less fortunate in this respect, though the last named, owing to its extraordinary mineral wealth, had, even at an early period, been more carefully explored than many others.

2. *General Configuration of the Land.*

Speaking generally, the conformation of the Brazilian Empire may be described as consisting of wide plains in the north and south, and in the interior mostly of hilly ranges, with numerous intervening valleys; or else extensive elevated table-lands, in various directions intersected by mountain ridges. Of these ranges three deserve

special mention, as forming what may be considered the ribs of the somewhat intricate skeleton of the Brazilian mountain system. These are the Serra do Mar, the Serra Mantiqueira, and the Serra dos Vertentes, all three running nearly parallel to each other in a northerly direction; the first named, also called Maritima, being the most easterly, and consequently nearest to the Atlantic seaboard. On its eastern side rise numerous streams, all of which, after a more or less easterly course, flow into the Atlantic. Compared with the gigantic rivers of the interior of Brazil, they must no doubt be regarded as small and even unimportant, and yet most of them—such as the Rio Doce, de Belmonte, Contas, and others—will bear comparison, for volume of water, with some of the largest rivers in Europe.

3. *The Serra Mantiqueira—The Itatiaia.*

West of the Serra do Mar, which, like the other Brazilian ranges, bears different names in the different provinces, lies the Serra Mantiqueira, the principal mountain system in Brazil, and which farther north is known as the Serra do Espinhaço, that is, as we might say, "the back-bone," or spinal range. Here are the loftiest summits in Brazil, amongst them Pico dos Orgãos, or Organ Peak, the Morro de Papagaio, the Juruoca, all 8000 feet and upwards above the sea-level.

But the highest mountain in Brazil is the Itatiaia, with a mean height of 8900, and according to some 10,300 feet. The crests of the Serra do Espinhaço seldom exceed 6000 feet, while the passes lie generally at an elevation of 3000. The western slopes of this main range descend into the wide basin of the Rio San Francisco, which ranks third amongst the great river systems of Brazil.

4. *The Waterparting of the Amazons and Plata River Systems.*

On its west side runs the third of the above-mentioned ranges. It is at once the most extensive and the lowest, stretching from the northern province of Ceará to the confines of Matto Grosso, thus forming the water-parting between the basins of the Amazons and the River Plata systems. These western highlands seem nowhere to fall below an elevation of 2150 feet above the sea, while numerous ridges are much higher, notably the Serra Geral, running in an almost southerly direction. But the Serra dos Vertentes is, in a more special sense, the name of the range that forms the water-parting between the streams flowing north and south.

5. *Detached Mountain Systems.*

From these three principal mountain systems, speaking generally, are thrown off all the other Brazilian ridges, the whole thus forming the Brazil system proper, which is in no way connected with any of the other South American ranges. It is surrounded by perfectly level plains, separating it both from the lofty Andes in the west, and from the Parime-Guiana system in the north, lying between the Orinoco and Amazons, and at various points touching on the Brazilian frontiers. But as scarcely one-fifth of the whole is really mountainous, it becomes possible roughly to distinguish between the highlands proper, the low hilly country to the north of them, the plains of the Paraná, and the southern region.

6. *The Primeval Forest Lands.*

The picture above given of the woodlands bordering the Amazons and its tributaries is to some extent appli-

cable to the vast tracts of virgin forests here stretching with little interruption for hundreds of miles. The forests of the Brazilian seaboard and river valleys have a similar general character to those of the great river plain of the equator, and contain trees of the same or similar genera, although the species are in many cases different, this being pre-eminently the case with the palms, which decorate the more sombre masses of the woodlands in both regions, but which, although presenting the same variety of size, stem, crown, and leaves, are represented by different species in the two areas. Where the land is more elevated and hilly, the trees are generally of less lofty growth, and farther apart; and all that tribe of plants of the swampy forests, with their long, broad, and glossy leaves, disappear, but in compensation flowers are much more abundant, a vast variety of exquisite ferns ornament the glades, and on the higher elevations the Brazilian pine (*Araucaria brasiliensis*), unknown nearer the equator, enters as a fresh element into the woodland scenery.

The Brazilian forest proper originally clothed nearly the entire surface of the Atlantic provinces of Brazil from 25° south latitude to the mouth of the Amazons, the chief exception being the arid districts of Ceara and neighbourhood north of Pernambuco, where the arboreal growth is more scanty. Nourished by the rich red loam—the result of surface disintegration of the prevailing granitic and other igneous rocks by floods of warm tropical rain—and stimulated by the high temperature and constant humidity, the magnificent arboreal growth spread and flourished, developing, under the influence of the secular struggle for existence, the thousands of strange and beautiful forms which now delight the eyes of the thoughtful traveller. In the mountainous southern province, where the capital is situated, extensive tracts of this glorious woodland have been cleared in making roads and plantations, and although

PRIMEVAL FOREST.

To face page 254.

some of it may be afterwards left uncultivated, the second growth never attains the luxuriance and charm of the original. Such woods of second growth are called *caá-poeira* in the language of the old Indian inhabitants, meaning felled woods, and consist of multitudes of low trees and saplings matted together with thorny bushes and creepers. The following is a description of the impression made upon an observer (Prince Adalbert of Prussia), not a botanist, at the first sight of the forest, after some experience of the *caá-poeira* of the environs of Rio de Janeiro.

"Hitherto we had been used to inquire, in passing through a wood, whether it formed part of the primeval forest; we no longer asked this question, for we were now conscious of the fact. The solemn feelings which arise on entering these forests for the first time, indicated the truth surely enough. At first we gazed in wonder on the labyrinth of tall straight trees, rising like giants, and into the tangled creepers and climbers which surrounded us; we looked up to the light roof of foliage, through which was seen the vault of heaven as through a veil; but we could not account to ourselves for all we beheld. Every object here is colossal, everything seems to belong to a primeval world. We feel ourselves to be in disproportion to all around us, and to pertain to quite another period of existence. Our astonishment is increased by the great difference between the vegetation in these forests and our own. Where in our country we find a shrub or fruit tree in flower, we here see gigantic trees, twice or thrice the height, in all the splendour of bloom, clothing the whole crown of the tree with its colour.

"The chief ornament of our day's ride were trees with magnificent large lilac, and others with white blossoms, contrasting beautifully with the surrounding varied tints of green. After enjoying this splendid display of colours, we turned to the deep shades which lay disclosed, solemn

and mournful, between the gigantic trees on our wayside. The flame-coloured raceme of a Tillandsia, a foot tall, and resembling a brobdignagian pine-apple or strawberry, glanced like fire among the dark foliage. Again our attention was attracted by the charming epiphytes, climbing up the straight trunks of the trees, or picturesquely covering their branches, which seldom shoot out from the trunk at a less height than fifty to eighty feet from the ground. From the fertility of the soil the trees spring up so densely that, when young, their branches, not having room to expand freely, strive to overtop one another. Among the various plants which spring from the branches, or cling to the stems of the trees, are the mosses hanging down, not unlike horses' tails, from the branches which support the epiphytes and Tillandsias. Myriads of woody climbers hang down to the ground, or are suspended in the air, several inches thick, and not unfrequently of the circumference of a man's body, coated with bark like the branches of the trees. But it is impossible for any one to conceive the fantastic forms they assume, interlaced and entangled. Sometimes they depend like straight poles, to the ground, and there strike root. At other times they resemble large hoops or rings, from ten to twenty feet in diameter; or are twisted like so many cables. Sometimes they lace the tree regularly from distance to distance, and often embrace it so closely as to choke it.

"Perfect silence does not reign in these forests, for the singing of birds and the whirr of the cicadas are heard incessantly. We diligently looked out for monkeys, but in vain."

In the interior of Brazil the forest becomes less continuous, being chiefly confined to the valleys of the rivers. On the plateaus, and in the inland provinces of Matto Grosso, Goyaz, San Paulo, and great part of Minas Geraes,

open grassy plains, called Campos, rugged with granitic outcrops, become the almost universal feature.

7. *The River San Francisco.*

To the interior proper of Brazil belongs the water system of the River San Francisco, which, owing to its central position, is undoubtedly the most commodious in the empire. Unfortunately this magnificent river is broken by the Paulo-Affonso Falls, that have not unreasonably been named the South American Niagara. The present emperor of Brazil, Dom Pedro II., has been so fully alive to the vast importance of the Rio San Francisco, that some years ago he did not hesitate to make a personal inspection of these wildernesses, further ordering a thorough exploration, which resulted in the handsome volume of the engineer officer, Eduardo José de Moraes. In more recent times we are indebted for much accurate information concerning the San Francisco to the experienced traveller, Captain R. F. Burton, and to the learned French missionary l'Abbé Durand; while, to another Frenchman, the distinguished savant Emanuel Liais, we owe a careful exploration and survey of the Rio das Velhas, the largest affluent of the San Francisco.

This great stream rises on the west side of the hills situated to the south of Minas Geraes, flowing from a cross ridge of the Serra da Canastra northwards to the 10th deg. S. lat., and consequently in a line nearly parallel with the east coast. Here it turns a little eastwards, after a course of 1800 miles discharging its waters into the Atlantic at San Antonio. It separates the provinces of Minas Geraes and Pernambuco from that of Bahia, and, for a short distance along its lower course, serves as the boundary of the two smaller provinces of Sergipe and Alagoas. Its affluents are countless, and even in the

dry season the volume of water at its mouth amounts to 616,000 gallons per second. Along its banks dwell a sixth part of the entire population of Brazil; that is to say, about 1,500,000 altogether. Even at Pirapora, at an elevation of 1760 feet above the sea-level, it is 615 yards broad, and forms a fall of 18 feet, while splitting into a number of branches, which make their way through the rocks for a space of 3600 feet.

8. *Affluents, Falls, and Navigation of the River San Francisco.*

Its first tributary from the east is the already-mentioned Rio das Velhas, in 17° 45′ S. latitude. From this point (1720 feet above the sea) to the falls of Paulo-Affonso, some 155 miles from its mouth, the San Francisco is navigable for a distance of 920 miles. These Caxoeiras or rapids, great and little, all comprised, and spread over a distance of 70 miles, are said to be on an extremely grand scale, and are occasioned by the river forcing its way through the coast range in order to reach the Atlantic. There is altogether a fall of 262 feet in their whole length, and above them the river periodically overflows its banks for many miles, thereby fertilising the land, but unfortunately also producing fever and ague. From November the water begins to rise, becoming muddy, and in March and April reaching its highest level, which is by this time some 21 feet above the ordinary height of the river. Below the city of Penedo the stream branches off and forms the islands of Corão d'Area and da Bomba. Its mouth, which is 1200 yards broad, is barred by sandbanks causing a strong surf, and the navigation of the river is impeded by many other obstructions, that have been hitherto overcome after the primitive fashion of the country. The river-bed

presents an almost continuous series of islets, between which the canoes and larger boats have to find the main channel.

The tributaries on both sides are unusually rich in affluents and rivulets (*riachos*) causing a regular increase in the depth of the stream, without, however, otherwise to a like degree furthering the navigation. Yet the river must be made accessible to vessels of a certain capacity, before we can hope to see the fertile lands along the whole course of the San Francisco opened up to trade. Meantime its great importance lies in the fact that it connects the gold and diamond fields of Minas Geraes with the sea; thus, in the absence of a practicable highway from Pernambuco, Bahia, Sergipe, and Minas Geraes to Rio Janeiro, presenting the only channel by which the products of these provinces can reach the capital.

9. *Climate of Brazil.*

The climate of Brazil is, for a tropical country, remarkably temperate, regular, and salubrious. In the north, that is, near the equator, there are two regular seasons, a wet and a dry, the former beginning about January 1st, the latter about July 1st, though occasionally varying as much as a month either way. In Rio there is no fixed rainy period, so that it is difficult to say which is there the wettest month of the year. However, the heaviest rainfall is in February, March, May, August, and November, the lightest in June, July, and September, though at times not a drop will fall in August.

In the wooded districts of Ceara, Pernambuco, Parahyba, and Rio Grande del Norte, the absence of rain often causes great droughts. During the wet season there is scarcely any wind, and the temperature varies very little throughout the day. But in the dry months it is always

cool in the morning and evening, while the heats of noon are tempered by a steady sea breeze, for the south-eastern trade winds prevail all along the coast. In places subject to the greatest heat, the maximum does not as a rule exceed 102° Fahr., while in those where the greatest cold is felt, the temperature, in exceptional cases only, falls below 39°, as on the mountain range of Itatiaia and in the plains of Rio Grande do Sul. Here it occasionally happens that the thermometer falls to the freezing-point, and even below it, in which cases the little lakes in the interior become covered with a thin crust of ice.

In the coast country, between Rio de Janeiro and the valley of the Amazons the annual mean temperature is about 82° Fahr., while from Rio southwards the heat diminishes perceptibly, the climate here becoming very cool. South of the Serra dos Vertentes, and especially on the plateaus of the Paraná province, the climate is that of the temperate zones. Here also rain falls constantly in summer, and to a less degree throughout the winter months. The heat is moderate, and the vegetation vigorous, though not to the same extent as along the coast farther north.

CHAPTER VIII.

THE REGION OF THE RIVER PLATE AND THE PAMPAS.

1. *Extent and Configuration.*

THE estuary of the Rio de la Plata ("Plate" or "Silver Stream") forms the outlet for the waters of the great South American river system whose basin embraces the region between 15° and 35° south latitude, and a great portion of the mainland between the Brazilian coast range, on the eastern or Atlantic seaboard, and the Cordillera of the Andes on the west. The lands comprised within the limits of this water system, including the provinces of the Argentine Confederation, the Republics of Uruguay and Paraguay, and portions of Brazil and Bolivia, are amongst the finest and most fertile on the globe. Here we find ourselves on the eastern side of the Andes, which descend on the west somewhat abruptly down to the neighbouring Pacific Ocean, but which, as has been already stated, slope more gradually to the elevated table-lands on their eastern or land side. Hence it is that their eastern slopes are much longer, or more extended, especially within the Argentine territory, containing many level valleys formed by spurs of the main range branching off in various directions.

2. *Steppes and Woodlands.*

Accordingly the vast domain of the Argentine States, which must in a sense be looked upon as the heart of this

region, presents the aspect of a boundless plain, with an imperceptible fall in the direction of the Atlantic Ocean eastwards. In the centre of this plain rise the smaller mountain masses of Cordova and San Luis, severed from the Andes by a salt and sandy plain sparingly wooded. In the river and coast regions, the level and grass-grown ground is frequently studded with a number of lagoons or lakelets, partly of sweet and partly of brackish water, and in many places presents excellent pasture lands.

As we proceed northwards the woodlands become more and more extensive and dense, their wealth in valuable timber increasing in the same proportion. In the south the trees are rarer and more stunted, being found only along the banks of rivers, and consisting mainly of the willow. A coarse but nutritive grass, low shrubs, and a few solitary trees make up most of the scanty vegetation in the lower valley of the Paraná, a great part of which is entirely destitute of timber. On the other hand, the coast of Brazil east of the Serra Santa Catharina is everywhere covered with the dense forest previously described, while farther south the superabundance of water produces marshy lands.

3. *Main Subdivisions.*

The course from north to south of the Paraná and of its principal northern tributary the Paraguay, divides the whole of this region into two parts of nearly equal width, each of which may again be subdivided into two long zones. Thus we may distinguish, in the main western section, the region of the *Pampas*, following the right banks of the Paraná and Paraguay, and that of *Gran Chaco*, a wilderness still but little known, stretching northwards to Bolivia, and including a number of Argentine provinces, or rather such portions of them as are not comprised in

the second main division lying nearer to the great Cordilleras, and forming what may be called the hilly region of the Andes. By this last is to be understood the eastern branches of this range, which, farther north trend more to the east, and assume the name of Cordillera Real, the elevated region between which and the coast range forms the Bolivian plateau, some 13,000 feet in average height and 150 miles in breadth.

4. *Southern Extension of the Plateau.*

This little known region was partly explored in 1872-3 by Dr. George Hieronymus, and Professor Lorenz, who found Tucuman and other provinces rich in medicinal plants. Not more than a tenth of the land is here under cultivation; sugar-cane, maize, and orange groves, being the chief products of these parts. The rest of the country is covered either with primeval tropical forests or grassy steppes, in which range numerous herds of wild horses and cattle. The Nevado de Castello, which they ascended as far as 16,000 feet, possesses a luxuriant alpine flora, including cactuses, asclepiads, and Piperaceæ, while the rocks contain numerous fossils and even traces of gold.

5. *The South American Mesopotamia.*

East of the Paraguay and Paraná, two distinct geographical regions are clearly formed, on the one hand by the upper course of the Paraná flowing from Brazil, and on the other by the Uruguay, pursuing nearly a similar parallel course southwards. Between the Paraná and the Uruguay extends the Argentine Mesopotamia, partly

occupied by a district claimed by the Republic of Paraguay stretching north and south between the Paraná and the Paraguay. But east of the Upper Paraná and Uruguay are the south Brazilian provinces of São Paulo, Paraná, and Rio Grande do Sul, besides the Republic of Uruguay itself, all those regions presenting a mountainous character in comparison with the flat Mesopotamian district. In this hilly country, forming our fourth and most easterly main subdivision, several of the most important tributaries of the La Plata river system take their rise. But south of the great inlet or so-called estuary of the Plata all these different zones cease to be distinguished. Here we can speak of nothing but a hilly region on the eastern side of the Andes, narrowing as it stretches southwards, and of the *pampas* or plains, broken here and there only by solitary disconnected ridges. These pampas occupy the whole country as far as the Atlantic seaboard, and stretch even over a large extent of Patagonia.

6. *The La Plata Water System.*

The confluence of the two vast streams, the Paraná and the Uruguay, forms the great bight or inlet known as the Rio de la Plata, from which the Argentine Republic and the Banda Oriental or Republic of Uruguay received the common name of the States of La Plata. Large vessels can ascend not only the Plate river proper, but the two main streams, for a long way upwards; the Paraná, indeed, for a distance of 1200 or 1300 miles, whilst the Paraguay is navigated by small steamers as far as Cuyabá, capital of the Brazilian province of Matto Grosso, 1700 miles from the sea. The Uruguay is ascended by vessels for a distance of about 300 miles to Salto, where the navigation is interrupted by the rapids.

Both the Paraná and the Uruguay have many tribu-

taries of secondary importance, but still more or less navigable. The Rio Salado flowing from the north-west joins the Paraná at Santa Fé, while the Paraguay receives the waters of the Rio Vermejo or Red River, and the Pilcomayo, also from the north-west.

TIGER ISLAND.

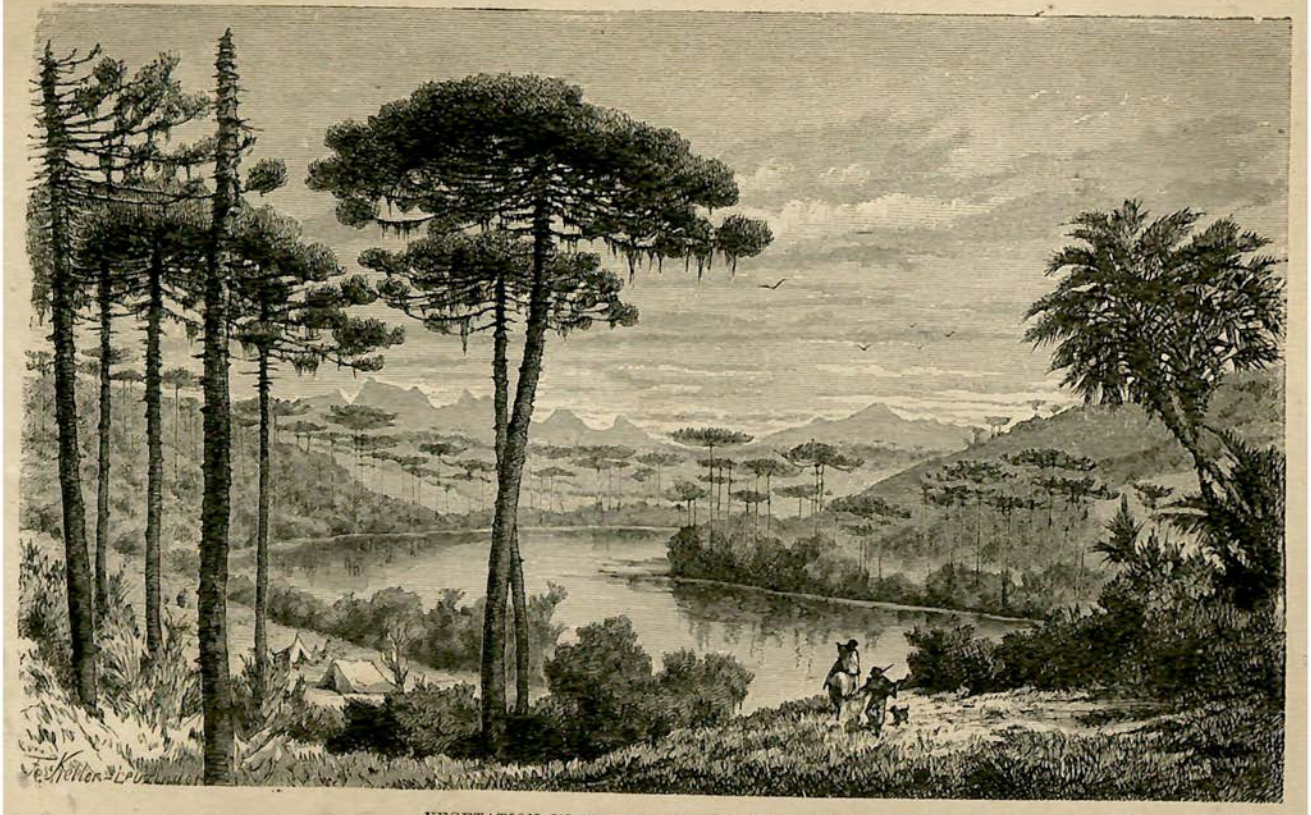
The Rio de la Plata, thus formed by the Paraná and Uruguay, is the widest river in the world, being 62 miles broad at Monte Video, and, with the exception of the Amazons, it discharges more water into the ocean than any other. Above Buenos Ayres and the intricate delta of the Paraná, is situated *Tiger Island*, where whole forests of peach trees are in full bloom in the month of August, and where the Seibo also (*Erythrina cristagalli*, L.) unfolds its gorgeous blossom. This thorny plant is of medium size, has a purple flower, and a soft wood, which, being useless for fuel, serves to make bowls, dishes, and household articles. The Seibo trees often form thickets

very like our European brushwood, but often so dense and entangled that it becomes necessary to hew a way through them with hatchets. The islands in the delta are formed of alluvial deposit extremely fertile, and often so elevated that they are not subject to periodical floodings. Many eyots are swept bodily away by the stream, which forms others elsewhere of the same materials; and as the proper channel or navigable main stream is constantly shifting, the latest chart of the delta becomes useless in a few months.

The water is lowest in August, but the branch known as Paraná de las Palmas is always deep enough for navigation. Besides this branch the delta is intersected by four other main branches, and the Paraná has altogether fourteen mouths, all of them subject to periodical floodings.

7. *The Paraná-Paraguay River System.*

By far the most important river system flowing into the Plata is the Paraná-Paraguay, which has been justly called the Mississippi of South America. It is fed by the tropical rains of Brazil on the one hand, and by the snows of the Andes on the other. The head-streams of the Paraná are in Brazil, one of them, the Rio Grande, rising about the 20th parallel in the Sierra de Mantiqueira in the province of Minas Geraes, to the north-west of Rio de Janeiro and within some 180 miles of the Atlantic. After a course of about 500 miles it unites with the Paranahyba flowing from the Serra da Matta da Corda, in the province of Goyaz. The Paraná flows thence for 1200 miles through a wilderness still but little known, forming, for some distance, the frontier of Brazil, and farther down that between Paraguay and the Argentine Confederation. At Candellaria (27° 30′ S. lat.) it takes a westerly course, which it follows to its



VEGETATION IN THE REGION OF THE PARANA.

To face page 266.

junction with the Paraguay at Corrientes, from this point forming one of the grandest streams in the world. This united river was formerly usually called the Paraguay, according to which nomenclature the Paraná would have to be regarded as a tributary of the Paraguay. But on the most recent and best maps the lower course of the stream is always named the Paraná, whereby the relation between the two rivers becomes reversed.

8. *The Upper Paraná.*

Its upper course presents an extremely romantic aspect, flowing through glorious lands that have hitherto remained entirely waste. They are especially rich in many species of palm-trees. Nor is the country less beautiful lower down. In the hilly regions of Brazil, above the Guarani missions, the Paraná has many waterfalls, for a stretch of about 250 miles presenting an almost uninterrupted series of cataracts and rapids.

9. *The Paraguay and its Tributaries.*

The Paraguay rises in the Siete Lagunas, seven little lakes under the 13th parallel, in the diamond-fields of the Brazilian province of Matto Grosso, where the hills branching off westwards form a great water-parting. From their northern slopes flow some of the most considerable affluents of the Madeira and Tapajos, as well as other streams making their way to the Amazons. But their southern slopes belong to the La Plata system.

In its upper course the Paraguay receives many large waters flowing westwards from Brazil, whereby it soon develops into a majestic and navigable river. Amongst its western affluents may be mentioned the Jauru, which joins it about the 16° 25′ parallel. Its source is at no

great distance from that of the Guaporé, one of the head waters of the Madeira, which, as we have seen, is on its part the largest tributary of the Amazons. The ridge parting these great river systems is only 6½ miles across, and it is said that the construction of a canal connecting the two would present no very great difficulties.

Below the junction of the Jauru begins a marshy district, known as the Xarayes Lagoon. During the rainy season it is under water, forming a vast but shallow inland sea, 300 miles long by 100 broad. Portions of the districts of Chiquitos and Gran Chaco are then also flooded. But as soon as the rains cease, the Paraguay carries off all the waters that have not evaporated.

Above its junction with the Jauru it receives many streams, affording a water-way eastwards towards the Brazilian gold and diamond fields, and farther down towards the wooded districts of Paraguay, which yield quantities of valuable timber. But its most important affluents come necessarily from the west, amongst them the Pilcomayo or Aragua-guazu, and the Rio Vermejo, or Red River, both of them watering the wilderness of Gran Chaco, which has been partly explored by Major Host, an engineer officer in the service of the Argentine Confederation.

The Pilcomayo, that is "Sparrow River," rises about the 19th parallel to the north-west of Potosi, in Bolivia, being there joined by some head waters, including the Pilaya from the west, itself formed by the union of several streams flowing from the Lipez, Tupiza, and Talina ranges. The Pilcomayo takes a south-easterly course, traversing the Gran Chaco, and flowing, with two branches, into the Paraguay below Asuncion.

The source of the Rio Vermejo, which was formerly taken as the northern frontier line between the Argentine and Bolivian States, is in the Bolivian hills of Tarija. It is navigable from about the 23d parallel, below Oran,

where it is joined by the Jujuy, or Lavayen, and, notwithstanding its many windings, it forms altogether an important water highway to the Rio de la Plata.

10. *The Indian Hunting Grounds of the Gran Chaco.*

East of the Salado, the next large tributary of the Paraná south of the Vermejo, there stretches northwards to the Bolivian province of Chiquitos a highly interesting and hitherto but partly explored region, confining eastwards on the Paraná-Paraguay. This is the famous *guarida*, or resort of wild beasts, known as el Gran Chaco, the hunting-grounds of many Indian tribes, who here find a safe refuge from the Spaniard. We possess more detailed information respecting the southern portion, between the Salado and the Vermejo; but the central strip, extending from the Vermejo to the Pilcomayo, is known only along the river courses, and the northern section, reaching as far as Otuquis, has been recently in part surveyed by Mr. J. B. Minchin.

11. *Vegetation of the Gran Chaco—The Troupial, Parrots, and other Birds.*

The wide-spread plains of the Gran Chaco, shared between the Argentine and Bolivian States, during the rainy season, from October to March, present in many places the appearance of an ocean studded thickly with verdant islands, and yet a few only of these districts are subject to inundations. Many parts have a uniform vegetation, growing mainly one single species alone. Thus we find, for instance, in one district groves of palms, in another of the *algarrob*, while places subject to the floods grow mostly the *vinal*, a beautiful species of mimosa. The prevailing

character of the region is scrubby and arid, owing to the absence of permanent water, but near the rivers there are rich forests, and in many parts the vegetation is wonderfully luxuriant. Here the traveller feels that he is in the very heart of the tropics. So exuberant is the vegetable growth, that it becomes difficult to understand how so limited an area can produce and sustain such dense masses of plants and trees. And, in truth, the ground itself is insufficient for all its offspring. The stems of the trees are called upon to support the most varied kinds of climbers and creepers, which encircle them with a marvellously-shaded mantle of green, profusely strewn with flowers of every hue. One wanders for days together beneath the shade of these natural bowers, through which glimpses are but rarely obtained of the deep azure of the sky. Here, Major Host tells us, he for the first time beheld the wonderfully artistic sack-shaped nests of the black-and-amber plumaged troupial, whose song, however, is somewhat marred by the jarring accompaniment of the shrill screech of countless flocks of parrots. He adds that, unless actually seen, it is quite impossible to form any idea of the amazing number of these noisy creatures, whose perpetual chatter drowns all other sounds, even the very roar of the torrent itself, rushing wildly down the rocky sides of the hills.

12. *The Gran Chaco—Night Scenery.*

And if the day with all its glories is so unspeakably attractive to the lover of nature, the marvellous nights of these regions still reserve fresh and unanticipated charms for him. There is nothing to compare with the impression of serene repose inspired by the sight of the starry heavens, especially in the more open meadow lands. Our thoughts revert unwittingly to those indescribable nights

on the silent deep, when the vessel is borne along as by an unseen power, on the unruffled surface of the waters, beneath the vault of a tropical sky. The charm is heightened by the countless swarms of fire-flies, whose phosphorescent lamps flash out and again suddenly disappear in the gloom. But these are things to be seen in order to be felt; such nights must have been actually experienced, for it is as impossible to describe as it is to forget the varied effects they produce on the mind of the lonely wayfarer.

13. *The Argentine Pampas—Their fascinating hold on the Imagination.*

Similar impressions to those inspired by the Gran Chaco wildernesses are also produced by the Argentine Pampas, as are here called those grassy, treeless plains, stretching out by the Lower Paraná away to the south of Buenos Ayres. Grass-grown plains, varied in one place by brackish swamps, in another by salt steppes, are spread over the whole southern and western regions of the Argentine Republic, and a great portion of Patagonia, as far as the slopes of the Cordilleras of the Andes. This vast grassy plain is nearly level, and covered with grass on its eastern side, but it becomes more uneven and broken as the mountains are approached on the west. Its height, at about 100 miles in the interior from Buenos Ayres, is only from 150 to 160 feet above the level of the sea. A line of small forts extends across the wide plain in the south, established for the purpose of protecting the settled part of the country from the predatory incursions of the wild tribes.

Marvellously varied and contrasted, says a recent traveller, are the feelings experienced in this wilderness by the wanderer who is at all alive to the grandeur of

nature or endowed with the least poetic fancy. Sublime appears to him the vast expanse of this seemingly interminable ocean of grass and flowers, while the solemn stillness, broken only by the occasional cry of a bird or the roar of the jaguar, bears him away from mother earth to the far-off, unknown, and dimly-realised sphere of some other and more ethereal region. In the presence of such an awe-inspiring solitude, his thoughts are unconsciously drawn to dwell upon the idea of eternity, a deep and yet a pleasant sadness takes possession of the thoughtful mind, a feeling intensified at the going down of the sun, and in the darkness of night merging in an overpowering sense of helplessness and terror.

Nor is it necessary to overstep the limits of civilisation, or betake oneself to the unpeopled outer Pampas, and there gaze on the setting of the magnificent day-star, in order to realise a certain sense of calm resignation. Even on the very threshold of an *estancia*, surrounded by every comfort of modern life, we seem oftentimes to be seized at sunset with "a yearning for the hereafter," and with a crushing sense of our utter helplessness in the presence of nature. Men are known who for years have toiled in the vain endeavour to hearken to the whisperings of reason alone, and who have smiled compassionately on those that spoke of a better future, and who yet, at a sunset in the Pampas, become so unnerved that they are nearer to tears than to scoffs; nay, will listen with devotion to the evening chimes announcing the Ave Maria, staunch Protestants though they be. And others are known who, after realising a more or less considerable fortune, have returned to their European homes with the firm determination of henceforth giving themselves up to the social pleasures there so abundantly provided for the well-to-do classes, and who yet, after a few years, are taken with an irresistible yearning for these dreary wastes, and,

carried away by a veritable home-sickness, have given up everything in the old land in order to begin life afresh in the Pampas, full of privations though they be. And although it may be impossible to explain the charm the Pampas have for the cultivated European no less than for the native guacho, certain it is that they do exercise this strangely fascinating power, as might be confirmed by many proofs.

14. *Strange Atmospheric Effects.*

Nor is it, as already stated, the beauties of nature in a landscape of such monotony that awaken this love of the Pampas, although the wayfarer will be often arrested in mute amazement at some physical wonder, filling him with a keen sense of pleasure, though itself nothing but illusion. Atmospheric effects, seldom missing on bright days, will in the eyes of the traveller convert a distant thistle-field into a forest of the finest timber, while the grass sprouting round a dreary marsh becomes for him a numerous troop of animated horsemen. Most frequent, however, are the mirages. He fancies he sees at no great distance an expanse of water glittering in the sun, and when, perhaps tormented with a burning thirst, he gallops forward, he finds the wished-for goal as far off as ever. Experienced residents in the Pampas are doubtless not deceived by such phenomena, but their knowledge is due not to their own better judgment, but to the indifference of their horses, that are never the dupes of these fallacious appearances.

PATAGONIANS TRAVELLING.

CHAPTER IX.

PATAGONIA.

1. *Extent—General Configuration.*

THE course of the Rio Negro, discharging its waters into the Atlantic at about the 41st parallel, is generally taken as the southern limit of the Argentine Confederation. The vast extent of country south of this Pampa stream, 900 miles in length, that is as far as the Strait of Magellan, is known by the name of Patagonia, a name without any real justification. To this region both Chilé and the Argentine Republic lay claim. The interior in the northern portion of the region presents the same general character as the Pampas, and is watered by a few rivers rising on the eastern slopes of the western coast ranges, traversing the entire width of Patagonia, and flowing eastwards into the Atlantic. The solitary Uttak range in the east throws off a southern branch, which is continued into the Argentine Pampas. But farther south the country becomes more bleak and barren, the soil for hundreds of miles being no better than a bed of shingle, with tufts here and there of coarse grass or thorny shrubs, with difficulty maintaining themselves. The land here slopes down from the foot of the Andes in a series of terraces with scarped edges, across which the streams flow in deep channels.

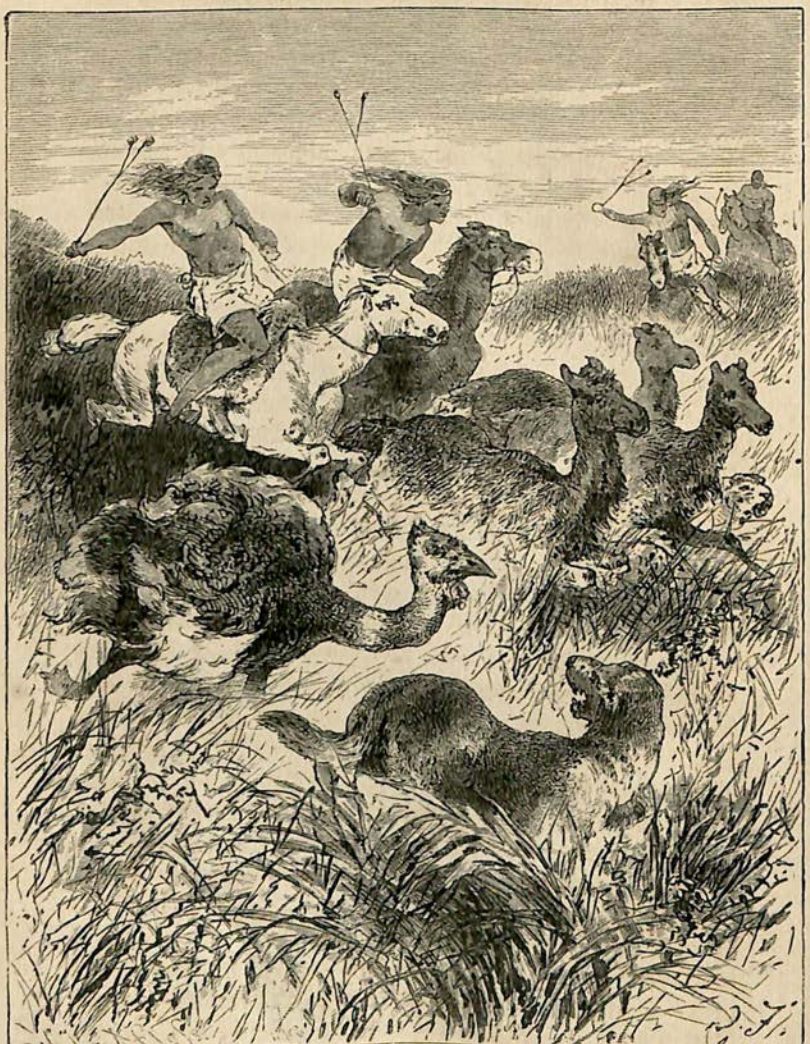
Patagonia, until recently one of the least known regions of South America, has been lately explored by

two Argentine savants, Dr. F. Moreno and Don Ramon Lista, the former of whom has published a map of the region, founded on his explorations between the years 1873 and 1880. The Chilian Republic has also caused the western side to be explored by an expedition conducted by Lieutenant Simpson, who ascended, in 1871, the river Aysen, which disembogues a little south of the island of Chiloe, in 45° 29′ south latitude. The end of the navigation was soon reached, for he found the stream encumbered by rapids and waterfalls, over which he was unable to take his boat, and was therefore compelled to continue his journey of exploration on foot, crossing the Cordillera by a pass which had not previously been visited.

2. *Lieutenant Musters' Adventurous Journey.*

But for the most complete information regarding the interior of Patagonia, and the character of its strange inhabitants, we are indebted to Lieutenant G. C. Musters. Ingratiating himself with a horde of Tehuelche Indians, he explored in their company the whole country in its length and breadth during the years 1869 and 1870.

Musters started from the Chilian penal colony of Punta Arenas, in the Strait of Magellan, on the 19th of April 1869, in company of a party of Chilians, and struck across the uneven and barren Pampa which stretches thence to the Santa Cruz, where he equipped himself for his farther journey at a small trading post there established. The weather during the winter months (May to August) was exceedingly severe, and the Santa Cruz river, lat. 50° south, was frozen over in January. The whole country was covered with snow, which gave additional monotony to the dreary scenery. But in the neighbourhood of the settlement valleys are found in which



GUANACO AND OSTRICH HUNTING. *To face page 277.*

there is good pasture for sheep and cattle, and corn had been recently sown with advantage. The trade with the Patagonians consists in exchanging spirits, tobacco, beads, cloth, knives, etc., for the feathers of the Pampas ostrich, and skins of the guanaco, Patagonian fox, skunk, and puma. Large herds of guanaco (a ruminant allied to the camel), and droves of ostriches (*Rhea Darwinii*), which are amongst the most characteristic animals of this desolate region, come down to the banks of the river during severe weather, for food and shelter, and are easily caught by *bolas*, or killed by dogs. The Santa Cruz has its source in a large lake in the Andes, and attains its greatest height during the summer months.

Towards the end of winter, in August, Lieutenant Musters completed his arrangements with a Patagonian cacique named Orkeke, and started on his long journey towards the north with a party of Tehuelches. The march was one long hunting excursion, varied with murderous squabbles, and encounters, generally of a friendly nature, with other parties of Indians. Sometimes a rest of a few days was taken in some verdant valley. When on the march, at the end of each day the produce of the day's chase was killed, cooked, and eaten, and the toldos pitched for the night's rest. The toldo is the only shelter used by this homeless, wandering race. It is a kind of tent, simply and speedily constructed. A row of forked posts about three feet high is driven into the ground, and a ridge-pole laid across in front of these; at a distance of about six feet, a second row five feet high, with a ridge-pole; and at the same distance from these a third row six feet high is fixed. A covering made of from forty to fifty full-grown guanaco skins, smeared with a mixture of grease and red ochre, is drawn over from the rear and secured by thongs to the front poles. Hide curtains, fastened between the inner poles, partition off the sleeping places,

and the baggage piled round the sides excludes the cold blast. In bad weather an additional covering is secured to the front, and brought down over an extra row of short poles, making all snug. The duty of pitching and striking the toldo devolves on the women, a number of whom accompanied the party with which Lieutenant Musters set forth on his adventurous journey. The Indians were mounted on good serviceable horses, which they rode without saddles.

Leaving Santa Cruz, they ascended the valley of the river Chico, a stream which traverses the wide grassy plains in a direction from N.W. to S.E., and disembogues in the Santa Cruz estuary. Early in the march they came in sight of the snow-clad peaks of the Cordillera, the long chain of which always afterwards, for hundreds of miles, formed the limit of their view on the left. Before reaching the head waters of the Chico, they turned to the north, and in the subsequent part of the journey crossed all the streams, few, however, in number, which descend from the Cordillera on their way to the Atlantic. Travelling along the base of the mountains, excursions were occasionally made into their recesses, where in verdant valleys and on wooded slopes, especially near the southern settlements of Chilé, wild cattle were found and chased. Musters was surprised here to see the wild strawberry and currant growing in profusion, and yellow violets and azaleas blossoming in great abundance.

Continuing northward, never far distant from the lower wooded ranges of the Cordillera, the country traversed was for long distances of a wild and rugged character. Narrow valleys, deep and gloomy gorges, furrowed the surface of the Pampas. These are formed, doubtless, by aqueous or glacial action, and by the torrential streams which still flow at their bottom. Some of these precipitous defiles are so deep and dark that even the red-

skins regard them with horror, and people them in their imaginations with evil spirits. The elevated table-land between the rivers forms barren and dreary waters, strewn with sharp stones, over which it was exceedingly toilsome to travel. At the foot of Mount Tele they came upon an extensive lagoon, on the margins of which flamingoes and roseate spoonbills were seen in incredible numbers. A short distance beyond this beautiful sheet of water, the party arrived at the banks of a considerable river, with which, a little lower down, another stream unites. Musters was not able to ascertain whether this formed one of the affluents of the Chupat, or whether it terminated in a large inland lagoon; the Indians differing in their statements on this subject, but some of them naming the basin Lake Coluguape. On the banks of another of the rapid streams which traversed the line of march trees were met with, the first which Musters had seen since he left the forest belt at Punta Arenas. The place was rich in eggs of the *Chloephaga magellanica* and the swan (*Cygnus coscoroba*), besides other birds. According to the Tehuelches, the river harboured a strange four-footed animal which they called the water tiger, *Tigre de agua*, and described as being larger than the puma; but this must have been an exaggerated description of the yellow-breasted otter, which is a well-known inhabitant of the waters of the Paraná. The weather, although mid-summer was at hand, was most wretched; Musters arrived at the conclusion that there was no true summer in these regions, and that the Patagonian year was divided into two seasons—a rigorous winter and a cold spring. This may be true with regard to the more elevated part of the plains near the foot of the Andes, but in the great desert tract lying to the east, which forms the great bulk of the land of Patagonia, the climate is dry and fine, the sky being clear, and evaporation very rapid.

On the 27th of December the party arrived at Teckel, where there was a large gathering of Indians, near the sources of the river Chupat. In this part of the country the character of the scenery was quite changed. Instead of the Pampa with its dreary monotony, through which he had hitherto journeyed, our traveller traversed a series of level valleys, of two or three miles in extent, watered by rivulets fringed with stunted trees and abounding with game. The hill slopes were a garden of calceolarias, alyssum, tiny wild geraniums, and other flowers. Amongst the plants were two magnificent creepers, one resembling a vine, with rich violet trumpet-shaped flowers, and another displaying gorgeous circular orange-coloured blossoms, with black lines radiating, like the spokes of a wheel, from the centre. From this sylvan paradise, continuing his journey northwards, he crossed a remarkable succession of barren stony terraces or benches, without any appearance of parallelism in their formation, such as would indicate any uniform action of water, and at length descended to the main branch of the Chupat, here forty yards in width, and easily fordable. This stream is characterised throughout its course by the usual narrow, gorge-like cuttings alternating with wide plains, which distinguish the Patagonian rivers.

Farther north, a visit was paid to the section of the Patagonian people whose head-quarters are at Manzanas; in carrying out which the party had to cross the Limay, or upper stream of the Great Rio Negro, which has its source in the large lake Nahuel Huapi, situated in the heart of the Andes. At length, in April, the final march was made across the country at its broadest part, from the foot of the Andes to the settlement of Patagones, near the mouth of the Rio Negro. This northern part of Patagonia forms a high, barren plateau, nearly destitute of water, the only source of supply being the shallow pools

formed by the rain, which dry up with great rapidity. Nevertheless, wild horses, guanacos, ostriches, Patagonian hares, and pumas, are found throughout the whole tract. In many places large salt-pans occur, which, during the winter, consist of shallow lakes of brine, and in summer are converted into fields of snow-white salt. In the valley of the Rio Negro, though cold winds are felt in winter, the climate is genial — vines growing luxuriantly, and wine being made from the grapes — the sheltered vale forming a striking contrast to the bleak wastes which constitute all the rest of the country.

3. *The Tehuelche Indians.*

As no occasion will present itself of returning to this southernmost region of South America, we may here devote a few words to its inhabitants. It need scarcely be remarked that the term "Patagonian" is entirely unknown to the Indians themselves. It was originally given to them by the Spaniards, in consequence of the large footsteps seen by them before they had yet come across any of the natives. Their real name is *Tehuelche* or *Tsonecas*, by which last they almost exclusively call themselves.

The Tehuelches proper, apart from the Foot Indians of Tierra del Fuego, possibly related to them, are divided into two great branches — a northern and a southern. They all speak the same language, though with a somewhat varied accent, and those of the south seem on the whole taller, more symmetrically formed, and also more skilful *bola* hunters than the others. The northern Tehuelches occupy mainly the district between the Cordilleras and the sea, from the river Chupat northwards to the Rio Negro, here and there being met with as far as the Rio Santa Cruz. Their southern kinsmen dwell in the region south of the

Santa Cruz, occasionally reaching as far as Punta Arenas. Both tribes, however, are often mixed together, and intermarry, but without giving up their distinctive clans.

Between the Rio Negro and the Chupat we meet with another tribe, speaking a different language, and whose head-quarters are at Salinas, north of the Rio Negro. These are the "Pampas Indians," by the Tehuelches called *Penek*, of which, according to Musters' conjecture, the word Tehuelche itself is a corruption.

4. *The Chenna Indians.*

Lastly, there is yet another tribe, differing both in speech and physical appearance from the foregoing, and forming apparently a branch of the Chilian Araucanians. These the Tehuelches call *Chenna*, but they are otherwise known as the *Manzaneros*, from their head-quarters, Las Manzanas, where the Jesuits had formerly a station. They are less erratic and more civilised than the other Tehuelches, and are said to own herds of cattle and flocks of sheep in the valleys of the Cordilleras. Though it may be doubtful whether they acquired the art from the Jesuits or not, certain it is that from the apples of Las Manzanas they are able to extract a very palatable cider, as well as an intoxicating drink from the beans of the *Algarroba*. The other Tehuelche tribes are fain to rest satisfied with foreign rum, which, combined with sickness, and especially small-pox, is rapidly diminishing their numbers. The total number of the Tehuelches roaming between the Rio Negro and the Strait of Magellan is estimated by Lieutenant Musters at not more than 3000 souls.

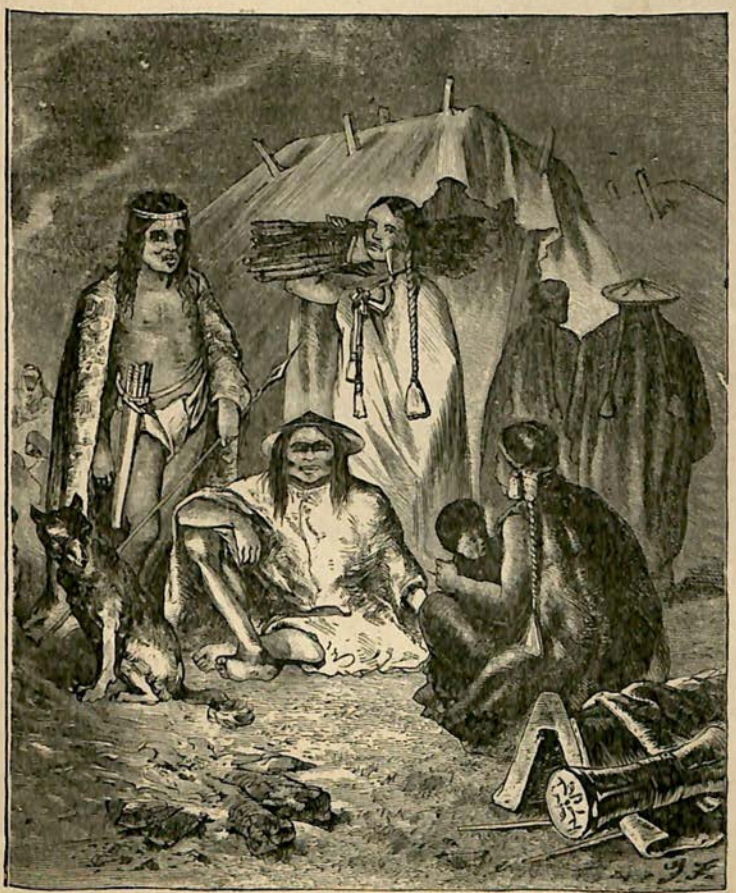
5. *Physical and Moral Features of the Patagonians.*

Of their physical qualities their size has been most frequently vaunted and contested. Musters, an unpre-

PATAGONIAN INDIANS.

To face page 282.

judiced witness, gives the average height of the men as six feet, though some reach six feet four inches. They are,



A PATAGONIAN CAMP.

moreover, exceedingly well proportioned, have an amazing walking power, accompanied by the faculty of enduring a

total abstinence from food without the least inconvenience; and, lastly, they possess an astonishing muscular development in the arms.

The average height of the women is 5 feet 4 inches. Their hair is seldom so long and fine as that of the men, and is worn in two queues, at times lengthened by horse-hair plaited with it. When not disfigured by paint, the young Tehuelche women are comely enough, and their demeanour is modest, though also coquettish. Hardships and labour produce no ill effects on them, but age renders them utterly repulsive.

Their dwelling is the *toldo*, as the Spaniards call the Indian tent, not unlike the huts of our gipsies, and made of guanaco skins smeared over with a mixture of fat and red ochre. The toldos are generally pitched in sheltered spots, with the entrance facing eastwards, as a protection against the terrific gales, blowing mostly from the west. They are kept very clean, and their furniture is limited mainly to cushions of old *ponchos* or cloaks, serving as seats, beds, and for the women also as saddles.

6. *Dress—Habits—Amusements.*

The dress of the men consists of a *chiripa*, or drawers, never laid aside, and a warm and loose cloak of guanaco skin, with the hairy side in, and the outside painted in various colours. They also wear high boots of horse-leather or puma-skin, while the head is covered with coloured net, or, when procurable, a hat.

The women wear a cloak fastened round the neck with a large silver needle, and beneath it a sack-like garment of calico, reaching from the shoulders to the hips. The children also have little cloaks, but prefer generally to run about naked. The Tehuelche ladies show a fondness for silver ornaments, which even the men do not

despise, and both sexes bedaub, especially the face, with red ochre or black earth, and tattoo the forearm. The principal occupation of the women while encamped consists in preparing the cloaks of the male members of their families; but they still find time for card-playing, gossiping, and scandalising their neighbours.

Though their songs are unmelodious, the Tehuelches have a good ear for music. Extremely moderate in their food, they eat at no regular time in the day, but whenever induced to do so by the pangs of hunger. They are, on the other hand, inveterate smokers; in the absence of tobacco using a herb procured by barter from the Araucanians, which, however, is never pure, but always mixed with Paraguay tea. Their principal amusements—for with them hunting is no pleasure, but the business of life—are horse-racing, dice and card playing, and pitching the ball. The winner simply sends for the lost stakes, and all debts of honour are most conscientiously and promptly paid.

7. *Marrige Customs, Religion, etc.*

From his tender years the Tehuelche is provided with a horse and all its belongings, and the children of both sexes can very often ride before they can walk. There are no inherited names, most of those borne by them being apparently derived from their birthplaces. Marriages are invariably based on a fellowship of feeling; and, if the damsel does not like the suitor for her hand, her parents never force her to comply with their wishes, although the match may be an advantageous one. The usual custom is for the bridegroom, after he has secured the consent of his damsel, to send either a brother or an intimate friend to the parents, offering so many mares, horses, or silver ornaments, for the bride. If the parents consider the match desirable, as soon after as circumstances

will permit, the bridegroom, dressed in his best, and mounted on his best horse, decorated with silver ornaments, if he possesses any, proceeds to the toldo of his intended, and hands over the gifts. The parents of the bride then return gifts of an equal value, which, however, in the event of a separation (a rare event), become the property of the bride. After this the bride is escorted by the bridegroom to his toldo, amidst the cheers of his friends and the singing of the women. Mares are usually then slaughtered and eaten on the spot; great care being taken that the dogs do not touch any of the meat or offal, as it is considered unlucky. The head, backbone, tail, together with the heart and liver, are taken up to the top of a neighbouring hill, as an offering to the Gualichu or evil spirit. An Indian is allowed to have as many wives as he can support; but it is rare to find a man with more than two, and they generally only have one.

On the death of a Tehuelche, all his horses, dogs, and other animals, are killed; his ponchos, ornaments, bolas, and all other personal belongings, are placed in a heap and burned; the widow and other womenkind keeping up a dismal wailing, and crying out loud, in the most melancholy manner. The meat of the horses is distributed amongst the relations on both sides; and the widow, who cuts her hair short in front, and assumes black paint, repairs, bag and baggage, to the toldo of her relations; or, if she has none in the party, to the toldo of the chief.

The body is sewn up in a mantle, poncho, or coat of mail, if the deceased possessed one, and is taken away by some of the relations and buried in a sitting posture, its face to the east; a cairn of stones being erected over the place, varying in size according to the wealth and influence of the deceased. The death of a child is marked by a display of sincere grief on the part of the parents. The horse it has been accustomed to travel on during the

march is brought up, the gear placed on it, even to the cradle, and the horse, thus fully caparisoned, is strangled by means of lazos; whereas, in all other ceremonies where horses are killed, they are knocked on the head with bolas. The saddle gear, cradle, and all belonging to the child, are burned, the women crying and singing. The parents, moreover, throw their own valuables into the fire to express their grief. On the occasion of the death of an only child of rich parents, fourteen horses and mares were slaughtered in addition to the one it was accustomed to travel on.

The religion of the Tehuelches is distinguished from that of the Pampas Indians and Araucanians by an absence of all traces of sun-worship, although the new moon is saluted, the respectful gesture being accompanied by some low muttered words, which Lieutenant Musters was never able to hear. They believe in a great and good spirit, who created the Indians and animals, and dispersed them from a certain hill in the interior of the country. They have no idols or visible objects of worship, nor do they seem to observe any periodical religious festival, on which either the good or the evil spirit is adored. The belief which prompts all their religious acts is that in the existence of many active and malicious spirits or demons, of whom the principal one is always on the watch to cause mischief. To propitiate or drive away this spirit is the function of the wizard, or doctor, or medicine man, who combines the medical and magical arts, though not possessed of an exclusive faculty for either. All sacrifices of mares and horses, not at stated times, but as occasion requires, such as a birth or death, are intended to propitiate the Gualichu. In camp the Gualichu takes up his position outside the back of the toldo, watching for an opportunity to molest the inmates, and is supposed to be kept quiet by the spells of the doctor. This household devil is sup-

posed to enter into the different parts of the bodies of people, and cause sickness, which the doctor is appealed to to cure. Besides this Gualichu there are many others which are supposed to inhabit subterranean dwellings, underneath certain woods and rivers, and peculiarly-shaped rocks. The Indians salute them by placing the hand to the head and muttering an incantation. In the meeting of Indians the devils are supposed to be driven away by the horsemen chasing at full speed round and round, and firing off their guns.

The office of wizard is not hereditary. A boy or girl, if what we should call odd in their ways, is considered to be marked out as a wizard. The stock-in-trade of a regular wizard consists of a few fetishes or charms, carried in a bag, carefully concealed from public gaze, and exhibited to his colleagues alone. In addition to these they seem to possess a real knowledge of simples, although this is not confined to them. Their professional operations are never accompanied by epileptic seizures or convulsions. They are expected to prognosticate the success or failure of undertakings, and the issue of sickness, and foretell the future generally; and their position in this respect is a dangerous one, as a failure of their predictions is frequently punished with death; but to make up for this risk they are universally received with honour and hospitably entertained. The Tehuelches are also believers, in common with rude and uneducated people everywhere, in signs and omens; they have their ill-omened animals, sights, sounds, and events. But they are not an abjectly superstitious people, and by no means yield implicit faith to the wizards, or trust to spells alone in the cure of disease.

Summing up the moral character of the Patagonians, Lieutenant Musters says that they do not deserve the character that has been given them of ferocious savages and brigands

of their inhospitable desert. They are kindly, good-tempered, impulsive children of nature, taking great likes or dislikes, becoming firm friends or equally confirmed enemies. Naturally distrustful of their old enemies the Spaniards, they have learnt to like better the traders of their southern coasts, who have treated them with more consideration. Their nature is not naturally treacherous, and they are untruthful only in minor matters, keeping faith always with those who keep faith with them.

CHAPTER X.

THE STRAIT OF MAGELLAN AND TIERRA DEL FUEGO.

1. *General Description of the Archipelago.*

TIERRA DEL FUEGO, or "Land of Fire," is one of those corners of the globe whither the foot of the wanderer seldom strays. It was Jacob le Maire of Amsterdam and William Corneliszoon Schouten of Hoorn, who, in 1616, first rounded the southern extremity of America, and named the southernmost point of the New World after Schouten's birthplace.

The archipelago, separated from the mainland by the Strait of Magellan, in which must be included the island of Cape Horn itself, consists of several islands of very different sizes, the most important being Desolation Land in the west, and King Charles' Southland in the east. The latter, which is by far the largest of all, forming, so to say, the heart of the archipelago, had already been discovered by Magellan (Magelhaes), who named this region from the volcanic eruptions of fire and smoke in the interior visible from the coast. But, according to another account, the name is derived from the fires constantly maintained by the natives in their canoes, consisting simply of the hollow trunks of trees.

2. *Its Geology—Soil—Flora.*

Geologically, this archipelago, or, at least, King Charles' Southland, presents no point of very special

interest. We meet everywhere with alluvial formations, marl or sand deposits, containing no minerals, although iron ores have been discovered spreading over a considerable area. On the southern shore of Useless Bay, the ground gradually assumes a schistose appearance. No land has yet been brought under cultivation, though we may perhaps reasonably suppose that potatoes, oats, rye, and the like, might be profitably cultivated here. The flora presents a striking affinity to that of northern Europe, and the insects show the same singular relationship, genera like *Carabus*, *Argynnis*, and numerous others, occurring here which are not found in any intermediate region of America; reappearing, it is true, in temperate latitudes of North America, but there exhibiting species which do not so closely resemble those of the extreme southern part of America as do those of northern Europe.

With the exception of a few hills facing northwards, the country is not very well wooded. But on the south side of Useless Bay, the different formation of the land produces a different, richer, and more vigorous vegetation. Here the stunted brushwood and isolated patches of woodland are replaced by a fine growth of timber, and vast primeval groves of wild brier, laurel, and fuchsias. Pertuiset, one of the recent explorers of Tierra del Fuego, met even with *Cineraria* and cinnamon. All the valleys contain rich luxuriant pasture lands, in which the horses disappear up to the breast, and seem to do full justice to the quality of their fodder. Pertuiset considers this extensive grazing-ground specially adapted to cattle-breeding, for which the much-abused climate of these islands would also seem to be particularly favourable.

3. *The Strait of Magellan.*

The peculiar scenery of the archipelago has been de-

scribed by many travellers, but by none so graphically and truthfully as by Charles Darwin, the great naturalist, who accompanied Captain FitzRoy in the surveying expedition of the Beagle, in the years 1832-6. The whole of the eastern portion resembles the country of Patagonia on the opposite side of the Strait of Magellan, consisting of open plains, and enjoying a climate of greater dryness than that of the western portions of the land. Travelling west along the strait, trees and woods become gradually more frequent, and the scenery assumes a park-like character; but the whole of the western and south-western portions are covered with sombre forest, the trees being mostly stunted beech and birch. The land is extremely mountainous and rugged, and deep narrow fiords and sea lochs, with precipitous sides rising to elevations of thousands of feet, penetrate the melancholy land. Scarcely an acre of level plain is to be met with. The trees clothe all the lower slopes of the mountains to a height of about 1500 feet, where they suddenly cease, and are followed by a band of peat extending to the limit of perpetual snow, which in this latitude is between 3000 and 4000 feet. The ground in these gloomy woods is everywhere covered by a thick bed of swampy peat, and encumbered besides with rotting and fallen trees, making walking impossible. There is a degree of mysterious grandeur, says Darwin, in the view of mountain behind mountain, with the deep intervening valleys, all covered by one thick, dusky mass of forest. The atmosphere, too, in this climate (where gale succeeds gale, with rain, hail, and sleet), seems blacker than anywhere else. In the Strait of Magellan, looking due south from Port Famine, the distant channels between the mountains appear from their gloominess to lead beyond the confines of *this* world.

The navigation of the strait, formerly of so much difficulty and peril, has been much facilitated by the

labours of the English naval surveyors, who have, under the direction of the Government, at various times devoted months and years to the examination and mapping of all the channels which could possibly serve as means of communication. Forty years after the expeditions of Stokes and FitzRoy, Captain Mayne was engaged for two or three years in the same work; and now the strait has become the safe highway for a whole fleet of commercial steamers plying between Europe and the ports of western South America. For the convenience of the numerous trading vessels, as well as of the ships engaged in the whaling and sealing trades of these seas, a singular kind of ocean post-office has of late years been established in the straits. Suspended from a cliff on the most prominent headland facing Tierra del Fuego is a little box made fast by a chain, which is opened by every passing vessel, either to deposit or take out letters, as the case may be. Thus this postal department is self-administrating, being entrusted entirely to the care and safekeeping of seafaring men, and it is pleasant to be able to add that no instance has hitherto been recorded of any abuse of the confidence thus reposed in them. Every ship undertakes the free delivery of all letters lying addressed to localities within its subsequent course.

4. *Punta Arenas.*

In the eastern section of the strait after leaving Cape Froward, we come upon the Chilian settlement of Punta Arenas (or Sandy Point), taking its name from the sandy character of the surrounding land. Some few years ago gold was here found in a neighbouring river-bed, and elsewhere coal of inferior quality. Although the interior arrangement of the 230 odd houses forming the little station of Punta Arenas makes little pretension to com-

fort, the place produces a friendly appearance, with its white and green wooden houses, and grey shingle roofs, and its broad, though somewhat rough, and but partly paved streets. It stands in the centre of a gently sloping plain,

PUNTA ARENAS.

cleared of trees, and terminating northwards in a little hill. But the climate is far from attractive. The sky is seldom clear even in summer, and no landing at Punta Arenas is possible more than about once in every five or six days.

The colony consists partly of involuntary settlers, that is, deserters from the Chilian army banished to this spot, and partly of voluntary immigrants, attracted thither by large concessions of land in the vicinity. These Chilians, as they call themselves, are moreover paid for their work by the Government; they form the most industrious portion of the motley population, but if they work hard, they are also hard drinkers, and their wives are said to

have a somewhat defective knowledge of their matrimonial obligations. Here are represented all grades of the human family, from the primeval Indian type to the pure Caucasian, including some of the dusky sons of Africa and their various mixtures with Indian and white blood. The half-caste race of Spaniards and Indians, to which the Chilians belong, is a strong, vigorous breed, well able to wield the axe, so indispensable in these dense forest lands. They lead the simplest of lives, their food consisting solely of potatoes, which flourish well in the island of Chiloe; although in Punta Arenas they are of but small growth. As the Strait of Magellan becomes more frequented, the prosperity of Punta Arenas will doubtless also increase; but meantime the prospects of the settlers are far from brilliant.

5. *The Tierra del Fuegian Indians.*

The natives of the archipelago are the Pecherais of Bougainville, or the Tierra del Fuegians of more recent ethnologists. Pertuiset maintains that their type of feature is not so low as is usually supposed. He ventures even to call it handsome, and in any case finer than that of the Patagonians, with whom they would seem to be ethnologically related. Oesterreicher met in Punta Arenas three young women from Tierra del Fuego (none of the male sex having yet appeared in the place), and of them he says that they show a type akin to that of the Patagonians—low forehead, large and prominent cheek-bones, face as broad as long, and a great power of bone and tooth. They are, moreover, well grown and portly, but their colour, on which opinions vary, is rendered somewhat doubtful by their filthy habits. Darwin says their skin is of a dirty copper-red hue; and no ethnologist doubts their belonging to the same race as the rest of the inhabit-

ants of America from south to north; but the tribes who inhabit the open plains of the eastern half of the archipelago are a taller and better-developed people than the miserable savages who lead a half-starved existence in the west.

The men have a thick head of hair, which they wear after the fashion of the Patagonians; but the women cut theirs short, leaving only two plaits hanging down on either side. The men are beardless, a few alone showing some trace of down on their face. The skins of the guanaco thrown over their shoulders protect them from the inclemency of the climate, but, unlike the Patagonians, they wear the hairy side out. Some have boots made of rat-skins, and complete their costume with a three-cornered head-dress, containing the hair, and made either of guanaco hide or sea-mews' skins. The women cover their nakedness with a scanty garment made of the skins of small animals, and deck themselves with shell necklaces and bracelets.

Their speech is similar to, without being identical with, that of the Patagonians. Their food consists of sea mussels, fish, rats, wild geese, and guanacoes. As weapons they use bows and spears, the former having strings formed of gut, the latter being made of wood hardened in the fire and provided with a stone point. They are also extremely skilful slingers, but are, as a rule, far from formidable.

6. *The Falkland Islands.*

It may not be out of place here to devote a few words to the group of the Falkland Islands, lying 240 miles north-east of Tierra del Fuego, and belonging to the crown of England. They consist mainly of two larger islands—East and West Falkland—with a smaller one, all deeply indented with narrow inlets and creeks, containing alto-

gether a superficial area of 6500 square miles. The population is at present 812, and the capital is Port Louis.

Darwin described the islands as an undulating land, with a desolate and wretched aspect, covered by a peaty soil and wiry grass of one monotonous brown colour, with here and there a peak, or ridge, of grey quartz rock breaking through the smooth surface. But large tracts are now known to consist of rich pasture. With regard to the climate, Admiral Sir B. J. Sulivan, who resided several years on the island, states that it is similar to that of South Devon in winter and of Scotland in summer. The lowest temperature in one severe winter was 16° Fahr., but in other three winters the ice was thick enough to bear a man's weight only on one occasion. The summer temperature rarely exceeds 65.° In various parts along the sea-shore a tall sedgy grass, called *tussoch*, growing to six or sometimes nearly ten feet in height, is plentiful. Of this the cattle are very fond, and it is also well adapted for thatching buildings and for the manufacture of mats and baskets. There are no trees whatever on the islands; scarcely anything worthy of the name of a bush. The chief use of these bleak outlying islands is in the breeding and rearing live stock, for which they are well adapted, the cattle, horses, pigs, and rabbits turned loose by the early settlers having multiplied to a great extent.

In 1874 the Governor of the Falklands made a most favourable report to the British Colonial Office regarding the future of this colony. The climate seems during the last twenty years to have undergone a considerable change for the better; at least the winters have become much milder, a circumstance so far confirming the late Professor Agassiz's theory that a branch of the Equatorial current has taken a south-westerly course in the direction of the Falkland Islands. In the Governor's report it is stated that the

quality of the wool has in many cases increased its value twofold, the improvement being ascribed to crossing with English sheep. The report further states that seven years ago the crew of a ship wrecked on West Island would have perished of hunger, but since then such progress has been made that, at whatever point a landing might be effected, food and shelter would be obtainable within distances of from 10 to 15 miles.

CHAPTER XI.

THE LATIN RACES IN SOUTH AMERICA.

1. *Relative Proportion of Natives and Europeans.*

THE continent of South America is still to a large extent the domain of the Indians, who form in most parts the main stock of the population, and are met with in the most varied stages of character and culture. The Europeans, politically the rulers of the land, constitute, when compared with the Red Men, but a thin layer. Thanks, however, to their mental superiority, they have impressed all the social relations with a peculiar stamp, so that we are fully justified in speaking of a Latin, or Romance, America, in contrast with the northern half of the continent, that has become the portion of the Anglo-Saxon race.

Most of the leading characteristics of this Latin America are the same as those met with in Central America, which belongs to the same race. In all their various social and political aspects, Central and South America form, on the whole, but one uniform system.

2. *Causes of the Partial Failure of Latin Civilisation in America.*

Attempts have been made to make the Latin race itself responsible for the phenomena that have here been observed, and especially for the failure of their colonisation schemes. In fact, that they do not understand the

art of colonising has come to be a very generally accepted dictum; yet the assertion will not stand serious scientific inquiry, opposed as it is to the real facts of the case. And, in making this statement, we take no account of the climatic conditions, by which the Teutonic races are unable to endure a continued residence within the tropics without suffering physical degeneracy.

In nearly all the regions where the Spaniards have settled and founded colonies, which are now independent free states, they everywhere met with compact, settled, and agricultural Indian populations, while the very opposite was the case with the English in North America. Hence it was impossible to get rid of the native element, as the erratic hunting tribes of North America were mostly got rid of. Here the Indians had, on the contrary, risen to a considerable degree of culture, though in many respects of a more or less barbaric nature, and this, as is invariably the case, was accompanied by a certain density of population. Hence from the first the European invaders here formed but a small minority of the people, which, owing to its superior mental endowments, was able to rule but not to extirpate the Indian majority. An unavoidable consequence of this state of things, conditioned in fact by the very nature of the case, was a mingling of the white and red races, which flooded the Spanish States with the sensuous and exuberant half-caste riff-raff of Mestizoes.

The development of European civilisation in Central and South America has been hindered mainly by these Mestizoes, who have tended rather to degrade it to the Indian level. In their presence the few pure-blood Latins that still survive are utterly helpless. In recent times several South American States have displayed a praiseworthy effort to raise themselves to a higher moral standard. But how far such efforts may be crowned with lasting success, it would be rash so soon to predict. What

has already been achieved will be duly noticed when we come to speak of each separate State in detail.

3. *The Spanish and Portuguese Elements in South America.*

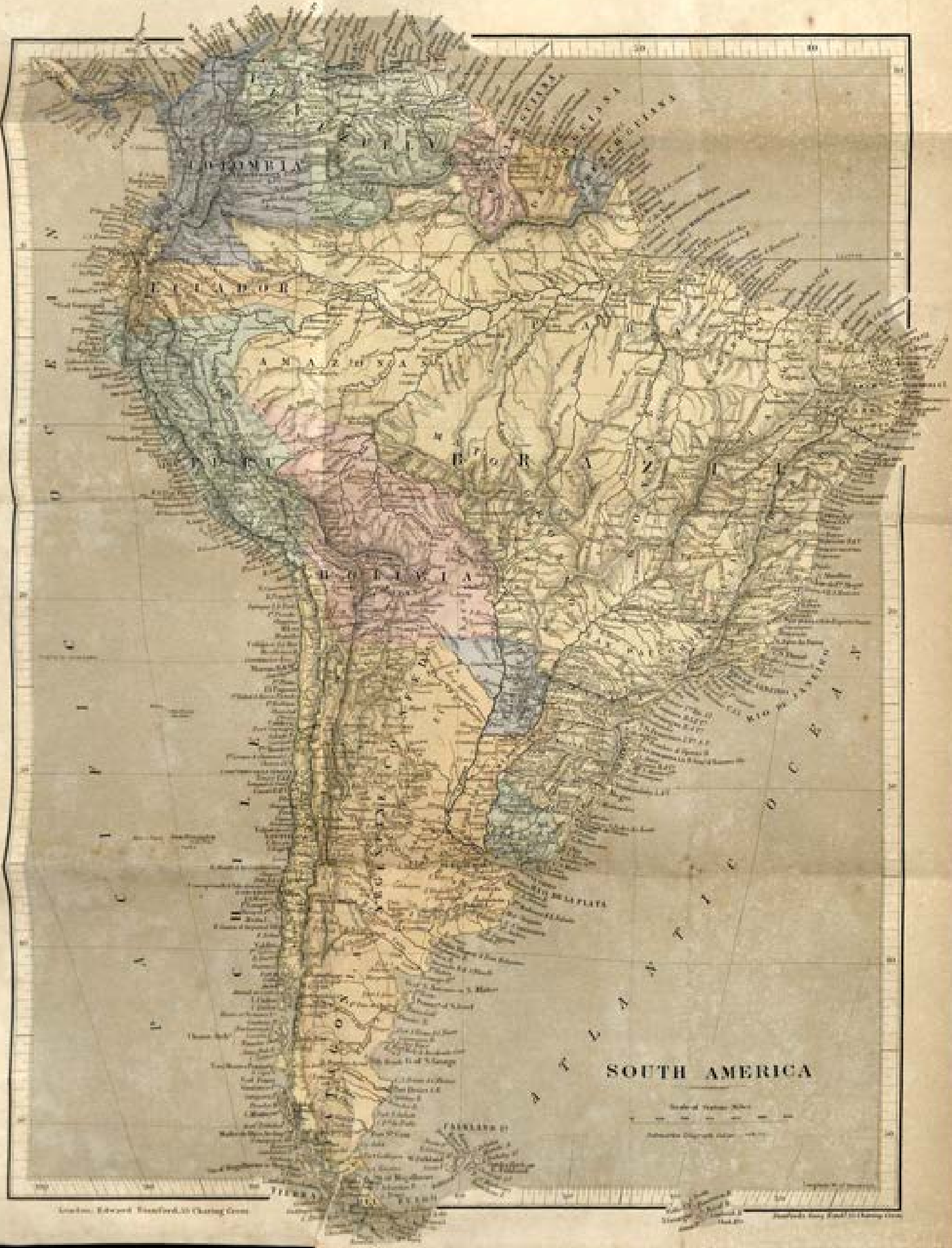
Meantime attention may here be directed to the two great ethnical and political divisions of the Latin world in South America. Apart from the English, French, and Dutch settlements in Guiana, which are so small that they can scarcely be taken into account when compared with the rest of the continent, the whole of South America is in the hands of two Latin peoples, shared however, between them in very different ways. These are the Spaniards and the Portuguese, and the ethnical distinction conspicuous in these two races in the Iberian Peninsula itself, is no less marked in their Transatlantic offspring. Yet both have this in common, that they look upon themselves as different nationalities from the mother countries, entertaining feelings of aversion, if not of downright hatred, towards the European descendants of their Spanish and Portuguese forefathers. In truth the South American of Chilé, Venezuela, or La Plata, is no more a Spaniard, or the Brazilian a Portuguese, than is the North American Yankee an Englishman.

Wherever Europeans, of whatsoever race, have been left to themselves in America, we see the characteristics of a new type in process of development, and this has already everywhere gone far enough to clearly distinguish them from their original progenitors. Hence it becomes easy to explain the antagonism that has sprung up between so many European nations and their Transatlantic offspring.

Still this community of feeling towards the outer world is utterly insufficient to bridge over the prevailing

inward difference between the Spanish-American and the Brazilian-Portuguese, a difference which everywhere shows itself in the most emphatic manner. Not only is it evident in the form of government, Spanish America having without an exception thrown itself into the arms of democracy, and fiercely resented all attempts at a restoration of the monarchy, while Brazil remained from the first loyal to monarchical principles. Brazil, which is in point of fact the only monarchy in the New World, and the only well-ordered state in South America, presents a further contrast to all its Spanish republican neighbours, both in the full development of its power and its varied populations. With those States it forms no permanent alliances, and these in their turn can be induced by momentary interests alone to enter into association with imperial Brazil. With the dissolution of such passing interests the temporary alliances themselves come also to an end.

In consequence of these antagonistic relations it will be found most convenient in the following account of these States to pass the Spanish American Republics first in review, and then treat of the Brazilian empire apart. Our notice may conclude with the European settlements in Guiana, which have politically nothing in common with the countries above briefly described.


SOUTH AMERICA
COLOMBIA
ECUADOR
AMAZONAS
PERU
BRAZIL
BOLIVIA
CHILE
PACIFIC OCEAN
ATLANTIC OCEAN
RIO DE JANEIRO
RIO DE LA PLATA
FALKLAND IS.
London: Edward Stanford, 55 Charing Cross

CHAPTER XII.

VENEZUELA.

1. *Unequal Distribution of the Temperature.*

WE take first in order the Republic of Venezuela, which embraces within its limits the great water system of the Orinoco. But having in a previous chapter described its geographical features, it will suffice here to remark that owing to the extent of the land the climatic conditions vary considerably, and may be divided into three distinct zones.

2. *The Hot, Temperate, and Cold Zones.*

The hot zone, ascending from the sea-level to an elevation of about 2300 feet, has an average temperature of 77° Fahr., and may on the whole be described as not unhealthy. The temperate zone, with an average temperature of about 65°, rises from 2300 to 6600 feet, is a perfect Eden of natural loveliness, and altogether a residence at once healthy and agreeable. The coldest months are December and January, when the thermometer falls to 59°, while even in April and May, which are the hottest months, it never rises above 77°.

To the cold zone belong all the highland districts from 6600 feet upwards, whether with or without mountains rising above the line of perpetual snow.

3. *Vegetation—Coffee, Cacao, Sugar, Cotton, etc.*

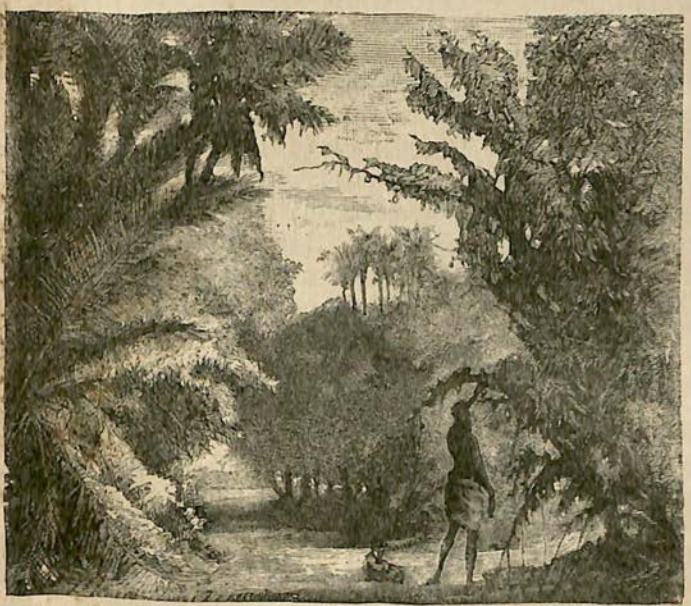
The vegetable kingdom in Venezuela is exceptionally rich and varied, and of the highest importance to the State, its products forming almost the only staple of trade in

THE COFFEE PLANT.

the country, and many of its species being extensively cultivated.

Foremost amongst these is the coffee plant, which constitutes the chief source of the wealth of Venezuela.

The best coffee grows in the temperate districts, more especially such as are subject to frequent early mists. In the warmer lands it grows beneath the shade of larger trees. In the fourth or fifth year it produces its first crop, which is gathered in October. The berries, resembling little red cherries, have their outer fleshy part first removed, by a special apparatus, and are then left for a short time to decay, after which they are dried in large paved enclosures. They are afterwards passed on to the



CACAO PLANTATION.

trilla, where, either by a stamping or rolling operation, they are rid of their parchment-like inner husks. Thence they are taken to the *venteador*, where they are subject to a final cleansing process. The yearly produce amounts at present to about 770,000 lbs.

Other important products of the vegetable kingdom in Venezuela are *Cacao*, the tree on which it grows (*Theobroma cacao*) belonging to the hot low-lying districts, and its cultivation being a very simple matter. The best cacao comes from the plantations of Chuao, the property of the University of Caraccas, and yielding a yearly crop of about 1100 lbs. The cacao of Caraccas is in high repute from the excellence of the chocolate into which it is made. The whole State produces annually about 66,000 lbs. The natural home of the cacao tree is in the great virgin forests of the Amazons, where it still grows wild in great abundance. It belongs to that class of plants in which the flowers and fruit have the singular property of growing direct out of the woody stem and branches.

Sugar.—The Otaheite cane (*Saccharum officinarum*) is the variety mostly cultivated. The ripe cane is at first crushed between iron rollers, the juice flowing through ducts into a large reservoir. Thence it is drawn off in iron caldrons, and boiled up to a certain degree, the scum being removed, and the fluid otherwise clarified. It is then poured into wooden moulds, where it gradually hardens. The crushed and dried cane is used as firewood. The sugar itself in its final state is of a brown colour, and is called *papelon*.

Cotton.—One of the finest sorts (South Sea Island cotton), was at first only experimentally tried at Lake Valencia, but with such excellent results that it is now cultivated in several places. Venezuela exports from 62,000 to 64,000 lbs.

Indigo, formerly one of the most important products of the country, has lately been largely superseded by coffee, the cultivation of which is much easier and more profitable.

Other productions are:—*Maize*, of which there are white, yellow, violet, red, and black varieties; many

species of *quinquina*, or *Peruvian bark*, all useful in fevers and agues, though the botanical names of several are unknown; and *Sarsaparilla* (*Smilax sarsaparilla*), a medicinal climbing plant, of a woody nature, long known to the faculty as a blood-purifier, and here so abundant that at present there are annually exported about 1650 lbs., of an average value of £7000.

Amongst other less important plants may be mentioned the *Amargoso*, or *Vallesia hypoglauca*, with its intensely bitter bark; the curious Maya fruit (*Bromelia chrysantha*); the *Micadia gonoclada*, or *guaca*, as it is called in Venezuela, an excellent blood-purifier and antidote; the *Guazuma ulmisotia*, the bark of which is used in the preparation of refreshing drinks; the bark of the *Weinmania glabra*, with its tanning properties; the *Pepe de cola*, or seed of the *Cola acuminata*, said to be a sovereign remedy in affections of the liver; the *Rosa de Montaña* (*Brownea grandiceps*), a good astringent; the *Pepa de cedron*, or seed of the *Sinabra cedron*, said to be a successful antidote against the bite of venomous snakes; the *Ojo de Zamuro* (*Muncuna puriens*), a cure for asthma; the fruit of the *Cujajo*, from the tallow-like fatty substance of which candles are made; and several other oily seeds, beans, and fruits.

4. *Population—A Warning to Intending Emigrants.*

The population of the Republic, according to the census returns of September 1873, amounts to 1,784,000 souls; reckoning the independent Indian tribes of the more remote districts, such as Apuré, Guiana, and the Amazons, in the interior. The most thickly populated are naturally the agricultural districts and the neighbourhood of the larger towns. But even here there is still ample room for new-comers, which can only be supplied

by foreign emigration. We trust, however, that European emigration may never be directed to these tropical regions.

A warning example of the fate awaiting European emigrants to these countries is afforded by the history of the German colony of Tovar. The learned Agostino Codazzi (born 1793 at Lugo in Italy, died 1859 at Pueblito in Columbia), carried away by his faith in German energy and endurance, took advantage of a lull in the civil commotions of Venezuela in order to try the experiment of founding a German colony there in 1842. For its site he made choice of an elevated plateau some 40 miles distant from Caraccas, and named the settlement Tovar, in honour of a capitalist by whom he had been aided in furthering the undertaking. In 1843 Codazzi brought over the immigrants, who were for the most part natives of the Black Forest. His perseverance overcame the difficulties to which the new and unknown conditions naturally exposed the young colony. Between the years 1848 and 1854 it was prosperous enough, its neat little houses resembling a Swiss Alpine village, and signs of rapid progress being everywhere manifest. But its trade was presently paralysed by the internal dissensions which for years disturbed all industry and commercial enterprise in Venezuela. Everything gradually fell into decay, and in 1870 the whole settlement was laid waste by the soldiery of Guzman Blanco. In order to entrench themselves in their position, they pulled down whole rows of houses, and "requisitioned" every available object suitable for the purpose. Since then the settlers, who at that time numbered about 1250, have been dispersed over the country.

5. *Pursuits: Agriculture—Mining Industries.*

The principal occupation of the people is agriculture. Besides the plants cultivated for their own sustenance,

and which are commonly called *frutos menores*, they also raise crops of cacao, coffee, cotton, indigo, sugar, and tobacco. These are comprised under the general name of *frutos mayores*, three of which, viz., coffee, cacao, and raw coffee, form the bulk of the export trade of the country.

Mining operations for gold are now carried on in Guayana, near the upper waters of the Caroni, and the copper mines of Aroa are said to have been again reopened. Guano is exported from the island of Orchila to the United States, and projects have been started for working several coal mines. At the exhibition of Vienna in 1873, the mineral kingdom of Venezuela was represented mainly by auriferous quartz and building stones.

Though far behind those of most other countries, the trades and manufactures of Venezuela are not altogether quite so insignificant as they have been described. In these lands, still to a large extent unexplored, thinly peopled, and not till recently brought within civilising influences, industry is altogether of too recent a growth to justify us in expecting great things of it just yet. But from certain symptoms it is evident that the people are endeavouring to turn to account the natural products of the country, to develop various branches of trade, and thus cease to be entirely dependent on the foreign market for their supplies. It would of course be premature to speak of any general export trade in articles of local manufacture, still some of them have begun to be exported in considerable quantities, such as soap, candles, lime, and liqueurs. Printing and binding, straw and wicker work, laces of various sorts, and feather work, are also prepared and executed in a very skilful way, and the same is true of the products of the tanyard, machinery, and cabinet-making. The Venezuelan artizan is very apt, and in most cases quite as good a workman as the European. Tools, and all articles of dress, hardware and ironmongery, beer, wine, and the like, are imported.

6. *Trade—Exports—Imports.*

The commerce of Venezuela is naturally bound up with its agricultural industry, and has of late years experienced a considerable expansion. In 1832-4 the whole of the export trade was valued at no more than £650,000, while during the five years 1870-4 the total exports averaged £1,200,000 per annum, and the imports £1,000,000. Unfortunately the returns have not yet been accurately made out for the whole country, and for all the several articles of trade. The export trade is mainly with the United States (Philadelphia and New York), England, France, Hamburg, Bremen, Spain, and Holland.

Venezuela receives wheaten flour (almost exclusively), cheese, and the like, from the United States; iron and cotton goods of all sorts from England; silks, hardware, paper, wine, perfumery, drugs, and of course the fashions, from France; and from Germany, through Hamburg and Bremen, considerable quantities of gold and silver ware, toys, glass, porcelain, paper, iron and steel goods, clothing materials, beer, and drugs. Foreign goods are mostly subject to an import duty, in the case of gold and silver ware *ad valorem*, but generally regulated according to the gross weight.

There is no direct export duty, but as the transport of goods on all the highways of the interior is exempt from tolls or other charges of any sort, a general tax is imposed on them in the so-called *Aduana terrestre*, or export office. Of the proceeds 70 per cent are returned to the several States, and the balance applied to the maintenance of the public highways.

Besides the numerous sailing vessels frequenting La Guayra, Puerto Cabello, and other Venezuela ports, the commerce of the country is now furthered by several lines

of ocean steamships. These are the Royal Mail with its European terminus at Southampton, the West Indian branch of which stops at St. Thomas, but forwards thence and receives there passengers and correspondence by means of schooners plying between La Guayra, Puerto Cabello, and Maracaibo; the Hamburg-American Steamship Company, and the French line between St. Nazaire and La Guayra, touching at Martinique. A direct line with New York has also been lately established, maintaining a monthly service with Venezuela, *vid* Port-au-Prince and Curaçao. Steamers also ply between La Guayra and Port of Spain, in Trinidad, and we may hope that the above-mentioned schooner service with St. Thomas will soon be replaced by a regular line of steamers.

7. *Highways—Projected Railways—The Postal Service.*

Important evidence of the recent advancement of the republic in material welfare is afforded by the construction of highways in the interior, of late years undertaken by the government. Besides the road from La Guayra and Caraccas, and another between Puerto Cabello and Valencia, there have already been completed nearly 250 miles of mountain roadways, often crossing very difficult ground, while the construction of others is being vigorously pushed forward. All this has resulted in the opening up of the rich valleys of the Aragua and Tuy, which have been brought nearer to the capital, and through it to the seaport of La Guayra, the transport of goods being otherwise greatly facilitated.

Venezuela as yet possesses no railways, all former attempts in this direction having been attended with very unsatisfactory results. But a project has lately been started for laying down a line between Caraccas and La Guayra. The postal department of the State is well con-

ducted, letters being now regularly forwarded by the lines of ocean steamers to Europe and the other parts of America. This service is also well administered in the interior, and is being rapidly developed and brought to greater perfection. A telegraphic system has been established between La Guayra, Caraccas, La Victoria, Valencia, and Puerto Cabello, that is to say in the most populous and richest districts of the country.

8. *Culture—Universities—General state of Education.*

The intellectual culture of the people Dr. Ernst (the well-known botanist, and professor in the University of Caraccas) is able to describe as having made of late years decided progress. Universities have been founded in Caraccas and Merida, and a third has been decreed for Trujillo. The first has nineteen professors and 165 students, but the second is much smaller and less important. Since the suppression of the ecclesiastical seminaries, decreed on September 21st, 1872, each university has four faculties, and by a decree of February 17th, 1873, *the natural sciences* were at last introduced into the regular curriculum of studies, and measures taken for establishing a museum.

Besides the universities there are a number of public and private educational institutions, both in Caraccas and the other cities of the Republic, as well as numerous national schools in nearly all the villages and centres of population in the country. The elementary schools are supported partly by the various municipalities themselves, and partly by the *estampillas de escuelas*, a slight stamp-duty raised on bills, deeds, and contract papers of all sorts. In this way it has been found possible to build several new schools, and at the same time to take measures for the establishment of a normal school and college of teachers.

Of national schools there are now upwards of 1000. The Caraccas public library already contains about 10,000 volumes, but still requires to be largely developed. Besides this the university has a small library, bequeathed to it by the learned Dr. J. Vargas, and many private individuals have contributed valuable collections of books on various branches of science.

9. *Relations of Church and State.*

Ecclesiastical affairs are administered by an archbishop, with his see at Caraccas, and three bishops, those of Guayana, Barquisimeto, and Merida, the State enjoying the right of patronage in their appointment. In fact, the archbishop and bishops are named by the Government and only confirmed by the Pope. Complete freedom of worship is sanctioned by the constitution, which, by the law of January 1, 1873, also recognises civil marriages and civil registrations generally. Altogether the Venezuelan people are much too enlightened and civilised to be intolerant, so that the spirit that inspired the Encyclical Letter and accompanying Syllabus here finds no sympathetic echo. No very wise steps however, have yet been taken towards the conversion and civilisation of the Indians.

10. *Government—Constitution.*

Venezuela forms a federate republic, consisting of nineteen states, as under:—Aragua, Apuré, Barcelona, Barquisimeto, Bolivar, Carabobo, Coro, Cumaná, Guarico, Guayana, Maturin, Merida, Nueva Esparta (Margarita), Portugueza, Tachira, Trujillo, Yaracuy, Zamora (Varinas), and Zulia (Maracaibo). Besides these states properly so called, there is the *Distrito Federal,* or the Federal District itself, including the capital Caraccas and the seaport of La Guayra.

The constitution, which, like those of all the Spanish American Republics, reads admirably on paper, guarantees the political equality and autonomy of all these States, each of which has its own president, legislative and judicial administration. The general affairs of the republic are conducted by the federal government residing in Caraccas, and composed of a Congress and the Executive Department. The Congress has two chambers, the Senate and the Lower House, and is supposed to meet on February 20 every year. Each State chooses two senators and, for every 25,000 of its population, one deputy, so that the latter represent the people, the former the autonomy of the several States.

At the head of the Executive is the President of the Republic, who nominally holds office for four years, and is elected in all the States by direct but secret suffrage. Besides him are two *Designados*, or Vice-Presidents, and six Ministers—that is, of the Interior, Finance, Foreign Affairs, War and Marine, Public Buildings, and Public Credit—all of them responsible to Congress. The finances are just now in a very unsatisfactory state, but we may hope they may improve ere long.

11. *Revenue, Public Debt, etc.*

The revenue consists mainly of the customs and excise dues. Of the whole amount, 60 per cent is devoted to the cost of administration, and the balance to the extinction of the public debt and the development of the material interests of the country. The public debt is partly internal, partly external, the former being subdivided into an old and a more recent (*deuda antigua y deuda moderna*). In September 1872 the old debt amounted to upwards of £3,400,000, the modern to about £607,500. At the present date, the foreign liabilities are represented as

reaching £8,597,562. With the exception of the dividends on one of the loans, no regular interest was paid for many years on any of the foreign liabilities, but a reduced interest is now paid on the whole amount. According to the contract of December 24, 1872, a company, under the title of "Compania de Credito," and composed of several of the leading houses of Caraccas, has been entrusted by the Government with the administration of the finances, a measure that has tended much to restore confidence, and increase the prospects of a happy solution of the present pecuniary embarrassments. This company issues bank-notes that circulate as ready money, and the whole undertaking has had the best possible results for the prosperity of the country.

12. *Political Troubles.*

But Venezuela can hope to arrive at a rapid and thorough development of her vast internal resources only on the condition of maintaining a lasting and honourable peace within her borders. Unfortunately the past history of the Spanish Republics does not inspire much hope of her succeeding in bringing about this desirable result. Just now, however, this State, hitherto a prey to constant internecine strife, is fortunately under the enlightened though autocratic control of the far-seeing President, General Don Antonio Guzman Blanco. After using his absolute powers as dictator to restore order and form a Congress subservient to his will, he has given present political peace and commercial prosperity to his country.

13. *Caraccas, the Seat of Government.*

Caraccas, delightfully situated in a mountain valley, 2900 feet above the level of the sea, and 12 miles from its port of La Guayra, especially is rapidly rising in im-

portance. In addition to the perennial spring of its marvellous climate, and the pleasant and amiable disposition of its inhabitants, it combines within itself nearly all the advantages of a great city. The European post arrives six times in the month; the warehouses and shops contain an abundant supply of English, French, and German goods; the houses, though mostly but one story high, and of modest appearance, are, as a rule, very comfortable, and adapted to the conditions of the climate. The streets are broad and now well paved, and the Plaza Bolivar has been wisely converted into a public garden, and adorned with a statue of the great deliverer. The noble Doric palace of Congress, facing the elegant Gothic façade of the University, together with the recently completed and extremely useful aqueduct, bringing a good water-supply from the river Macarao, are all durable monuments of its present prosperity.

CHAPTER XIII.

THE UNITED STATES OF COLOMBIA.

1. *States of the Confederation—Extent.*

THE United States of Colombia, as the Republic of New Granada is now styled, comprise the following nine States: Magdalena, Bolivar, Panamá, Cauca, Antioquia, Tolima, Santander, Bojaca, and Cundinamarca, together with the Federal District of Santa Fé de Bogotá. Their domain extends, along the Atlantic seaboard, from the Isthmus of Panamá, one of the nine states of the Union, as far as the peninsula of Goajira; southwards, along the Pacific coast, to 1° 50′ north latitude; and in the interior as far as the upper waters of the western tributaries of the Orinoco, on the Vènezuelan, and the northern tributaries of the Upper Amazons, on the Brazilian, frontier. The superficial area of this vast region is about 504,773 square miles.

2. *General Configuration of the Land.*

The general topographic configuration of the country is determined by the three great ranges into which the Andes, continuing from Peru and Ecuador, branch off as they enter the State, which they traverse for its whole length from south to north. Between these three chains lie three broad, hot, and deep valleys, watered by the Atrato, the Cauca, and the Magdalena, all three navigable for steamers. This disposition of the land into valleys

and mountains rising above the line of perpetual snow renders it subject to a great diversity of climates; all zones of the earth are here represented—from the cold of the polar regions on the mountain tops to the heats of Senegal in the sweltering valleys, with the mild climate of the temperate zones on the intermediate elevated table-lands and slopes of the hills.

3. *Trade—Future Prospects.*

As mistress of the Isthmus of Panamá, Colombia must some day become a very important country, even though, notwithstanding its great extent, it as yet advances, like other Spanish American Republics, but slowly in the development of its natural resources. These are at present limited mainly to its tropical produce, such as coffee, cotton, Peruvian bark, indigo, indiarubber, and to the export of precious stones, such as emeralds, of which mines exist near the capital. Tobacco is also cultivated, and the famous Ambalema cigars, here manufactured, are appreciated by connoisseurs.

4. *The Panamá Railway.*

Panamá and Aspinwall on either side of the isthmus are connected by a railway, which, in spite of its limited extent (48 miles), is the most important and almost the only line in the State.

For the commerce of the world this little railway is of no slight importance, as it reduces the distance between New York and Hong-Kong by 5000 miles, that is from 16,965 to 11,965. The traveller, soon after landing at Aspinwall, or Colon as this place is also called, finds himself suddenly in the midst of a scene of tropical beauty such as is scarcely elsewhere to be surpassed, for

the railway line passes through some of the most picturesque parts of the tropical American forest. Cacao trees, palms, bananas, and bread-fruit trees, stretch their branches and foliage out on both sides, while the damp soil is covered by a luxuriant growth of water-plants of the most varied hues. The air also is alive with birds of gorgeous plumage, humming-birds, tanagers, and euphonias, the songs of many being varied by the discordant chatter of the monkeys springing wildly from branch to branch, and the screaming parrots. In the yellow stream bask huge alligators, waiting for their luckless prey.

Yet even here signs of civilisation are already visible —houses, plantations, railway and telegraph lines. The short railway above alluded to cost, with its rolling stock and other belongings, some £2,500,000, and in 1873 as much as 152,000 tons of goods were conveyed over it. It was opened in 1855, and the iron rails are now about to be replaced by steel. It belongs to an American company, which has spent millions of dollars on the harbour of Aspinwall and its surroundings. The transit trade across the Isthmus of Panamá is at present of the estimated value of £17,000,000 per annum.

5. *Aspinwall and Panamá.*

Aspinwall lies on a marshy island separated by a narrow channel from the mainland, and is nothing but a dirty negro village, with a few American houses fitted up for the accommodation of strangers. Should the inter-oceanic canal recently commenced under M. de Lesseps' auspices be carried out, a great change will speedily be effected in the condition of this and neighbouring places. The traffic on the line across the isthmus suffered severely at first from the competition of the American Pacific Railway across the continent to San Francisco,

but it has again revived, especially since the year 1874 when its management fell into the hands of the American Pacific Mail Steamship Company. This company runs powerful paddle steamers between New York and Aspinwall, and on the Pacific side has placed a fleet of new iron screw steamships, plying between San Francisco and Panamá.

Panamá itself is an old Spanish town, with a negro quarter, and extensive ruins that have rapidly been covered with a thick verdant clothing of creeping plants. But it is otherwise a filthy place, intolerably hot, and swarming with a motley population of coloured races. The sight of the harbour and offing, with its green rocky islands, affords half an hour's enjoyment, after which the traveller is only too glad to continue his journey.

6. *The Projected Scheme of Inter-Oceanic Canalisation.*

The treaty concluded between Colombia and the United States, in 1869, secured to the latter power the right of determining on the best route for the projected canal across the isthmus. This project was long canvassed, and, in the above-mentioned year, Commander Selfridge was commissioned by the United States Government to make a survey of the whole ground. We have already given, under the head of Central America, some account of these American surveys; in continuation we may here record that Selfridge began at once with the so-called Darien line, between Caledonia Bay on the Atlantic and the Gulf of San Miguel on the Pacific. This was surveyed early in 1870, together with the Morti and the San Blas routes. In 1871 further surveys were made of the Atrato, Cacarica, the Napipi and the Tuyra routes. In 1873 the Napipi and Doguado line was carefully examined,—the line which Commander Selfridge

seemed to find more advantageous than any other. By the treaty made with the United States, the Colombian Government agreed to cede six miles of land on each side of the canal, reserving for themselves 10 per cent of the net income of the completed work for the first ten years, and, after the canal was paid for, 25 per cent of the net profits. Further clauses stipulated that the canal should be commenced within five years, and finished within fifteen years after the ratification of the treaty, otherwise the charter would lapse. The charter was to have been valid for one hundred years, and the canal to be under the control of the United States, with the provision that the navigation should be open to all nations in time of peace, but closed to belligerents. Since the surveys were made, the Washington authorities, as we have already stated, decided in favour of the Nicaragua line; but the Panamá route has been more recently taken up with energy, by a company having its seat in Paris, and the works are already commenced.

7. *Savanilla.*

Colombia possesses on the Pacific no important seaport besides Panamá, nor on the Atlantic any really available shipping-place except Savanilla, at the mouth of the Magdalena. For Aspinwall, no less than Panamá itself, is merely a port of transit trade, and with so little local industry or population, that primeval woodlands are seen in the background.

Savanilla, or rather its bay, for the place itself is nothing but a fishing village, inaccessible to large vessels, may be said to have been made a seaport by the Germans. In 1871 a Bremen company laid down a road 16 miles long, from the harbour to the old Spanish town of Baranquilla, besides providing lighters and steam tugs for the convenience of the larger steamers. Several river steam-

ship companies, one of them German, with ten or twelve boats from 50 to 200 tons burden, serve to convey goods

COLOMBIAN DWELLING.

inland along the course of the Magdalena. This flourishing place has superseded, in commercial importance, the old towns of Santa Marta and Cartagena (the former east

and the latter west of the Magdalena), which figure so prominently in Spanish American history of former times.

8. *The Magdalena Water Highway.*

This river, flowing between the central and eastern branches of the Andes, and traversing the whole land from south to north, is the great highway of the country, forming the sole outlet for the trade of five of the inland States, as well as for a large portion of that of the two States lying on either side of its lower course along the Atlantic seaboard. The Colombian Government has projected a railway from Bogotá to Honda, the extreme point to which the Magdalena is navigable for steamers. It is also proposed to deepen the bar at its mouth, thus enabling deep-sea vessels to reach Baranquilla, which is now being brought into immediate connection with the river by means of a short canal.

Baranquilla, at present the third city of the Union in size, has a population of 11,000, possesses an excellent wharf, and is the centre of the import and export trade of all the Federate States.

9. *Population—Cultivation.*

According to the census taken in 1871, the population of the Union amounts to 2,913,343 souls, distributed as under:—435,000 in the lovely and fertile valley of the Cauca; 1,300,000 along the level lands and the slopes of the eastern Cordilleras, including the States of Cundinamarca, Bojaca, and Santander, on the right bank of the Magdalena; 366,000 in the mining State of Antioquia, belonging to the labyrinth of hills in the Central Cordillera, and situated on the left bank of the river, opposite Santander; 327,000 in the hot low-lying region bordering on the Atlantic; 206,000 in the Isthmus of Panamá; 200,000

in the central valley of the Upper Magdalena, where the river is still navigable from Honda upwards. Here all the land is flat and level with the stream, forming the important State of Tolima, which, till within a few years, supplied the greater part of the export agricultural produce of the Union. But since then the cultivation of the two Atlantic States, so conveniently situated for foreign trade, and with a soil as rich as that of Cuba, but with the further advantage of being intersected by several natural navigable channels, has begun to be largely developed, their products now forming two-thirds of the whole export trade in the agricultural produce of the Union.

10. *Primitive Means of Transit.*

But the progress of the interior is still greatly retarded by the want of proper highways. The principal towns of the States situated between the branches of the Andes are at an average distance of from 60 to 90 miles from the Magdalena. Bogotá, the capital, itself, is situated at an altitude of 8600 feet, on a plateau, 65 miles from its port, Honda, on that river. Here goods are forwarded over rugged mountain pathways, in loads of 250 lbs., disposed in two bales of 125 lbs. each, each load costing for carriage from 24 to 36 shillings. Packages exceeding these weights are obliged to be conveyed farther on the backs of carriers. Those who are thus employed to do the work of beasts of burden are mostly women, so that this traffic has a tendency to lower and debase a portion of the population. Besides which the lighter articles only can be thus conveyed, while heavy objects of machinery and the like are unable to be forwarded across country to the very places where they are often most needed. In general, agricultural machines, fire-engines, coaches, and waggons, and everything weighing more than half a ton, are ex-

cluded from the remote provinces for want of proper means of transport.

11. *Railway and Telegraphic Systems—Public Instruction.*

In 1864 the Government began the construction of a telegraphic system, and there have already been completed nearly 1000 miles, connecting the capital with the more important cities in the north of the Union, including the port of Buenaventura on the Pacific. Here the system will be ultimately connected with the submarine cable that runs along the coast of Chilé and Peru, and is intended ultimately to form a junction with the European and Atlantic cables at Panamá.

The Central Government has also been much occupied with the educational question. The new organisation of national schools, modelled on the German method, took effect in the year 1870, and there are already as many as 1800 schools in the Union, giving instruction to 52,000 boys and 23,000 girls.

The system introduced in that year provides also for an *Escuela Normal*, that is, a college for the instruction of teachers, in the capital of each State. Those who are here specially trained for the work receive appointments in the national schools, where they impart instruction in reading, writing, arithmetic, the elements of Spanish composition and recitation, the first principles of medicine, and a general knowledge of the physical features and history of the country; or they are passed on to the more advanced middle schools, where the instruction is of a much higher order, including such subjects as algebra and practical geometry, physics, chemistry, mechanics, geometry, etc.

There are also special girls' schools, where the subjects of formal instruction are somewhat curtailed, being wisely replaced by needlework and the principles of household economy generally.

12. *Credit—Revenue—Foreign Trade.*

A system, intended to place the commercial and public credit of the country on a sound foundation, has been introduced, and has already been largely developed. A Bill and Discount Company, commanding general confidence, was established in the capital in the year 1871.

The national revenues at the close of the financial year 1879-80 amounted to £982,000, the expenditure being £1,253,386, and the public debt, owing to foreigners, nearly four millions, three-fourths of which is due to British creditors, who hold as security on mortgage the chief source of revenue to the republic, namely that derived from the Customs.

In 1873 the foreign trade of the country was valued at £5,290,000, and was conducted by 729 sailing vessels of 46,697 tons burden, and 281 steamers of 341,459 tons, exclusive of the through traffic across the Isthmus of Panamá, which is free of dues. The principal articles of export were:—Coffee, indigo, cotton, indiarubber, hides, gold and silver, Peruvian bark, straw hats, and tobacco.

13. *Civil Dissensions—Constitution—Religion, etc.*

But even in Colombia the blessings of political order and peace seem still to be little appreciated. Several insurrections in the provinces have broken out and been quickly put down during the last few years, while three presidents have been legally deposed in rapid succession. The civil war that raged from 1860 to 1862 ended in the reorganisation of the country and the proclamation of the constitution of 1863, under which the administration is now conducted.

This constitution introduced the federal system analogous to that of the United States, and conferring on the

nine States of the Union separate administrative powers for the internal government of each.

All foreigners enjoy equal rights with the natives. There is no state religion, natives and foreigners alike being guaranteed the most complete freedom of conscience and worship, and in Bogotá and other towns Protestant churches have been opened. Nearly all the States have adopted trial by jury in criminal cases, and imprisonment for debt is unknown.

The practice of all trades and professions, including those of the law, medicine, and the apothecary, is absolutely unrestricted, so that it is unnecessary to be possessed of any diplomas. The only monopoly in the country is that of salt, which is in the hands of the Central Government, and of that of the rum distilleries, in some States administered for the benefit of their own municipal revenues. The trade in arms and ammunition is entirely free.

CHAPTER XIV.

THE REPUBLIC OF ECUADOR.

1. *Extent and Population.*

THE southern neighbour of Colombia is the Republic of Ecuador, the smallest of all the free States in the north of South America. It takes its name from the equator, by which its northern parts are intersected. The three departments, subdivided into ten provinces, have a total area of some 218,984 square miles, with a population of about 1,000,000, including, however, many still savage and heathen Indian tribes in the great forests east of the Andes.

Little need here be added to the account, given in a previous chapter, of the configuration of the elevated region where is situated the famous table-land of Quito. A rapid survey of the State will give us an opportunity of describing its principal features. But before doing so we shall devote a few words to the group of

2. *The Galapagos Islands,*

in the Pacific Ocean, which belong politically to the Republic of Ecuador. This archipelago is crossed by the line of the equator, and consists of nine or ten islands of various sizes, all of volcanic origin, their surface presenting the appearance of a dreary arid waste. A couple of high, cone-shaped hills, no doubt covered with grass,

but also completely enveloped in mist; near and between them crater-like elevations of naked rock; the greater part of the island overgrown with stunted trees, or rather bushes of a brownish hue, amongst them being conspicuous the dismal-looking giant cactus (*Cactus Peruviana*) —such is the picture we have in approaching the island of Charles I., or Floreana. The others worth naming are Chatham, Albemarle (the largest of the group), Narborough, Indefatigable, James, and Hood Island.

At present entirely uninhabited, they still bear traces of their former occupation by buccaneers, whalers, and the subsequent colonists from Ecuador; the islands at the time of their discovery being unpeopled by man. In the woods we meet with the cotton plant, in the plains tobacco, planted by the former settlers, all now growing wild, besides some magnificent fig-trees, oranges, Peruvian plums, cherimoyas, and Avocado pears. There are also herds of wild cattle, horses, and asses, ugly gaunt bony swine, wild dogs and cats, and in the more inaccessible parts a few goats.

But the most interesting feature in this lonely group of islands is that furnished by the singularity of their indigenous animals. They were found, when their productions came to be examined by a skilled naturalist like Darwin, who visited the Galapagos during the voyage of the Beagle, to be tolerably well peopled by many species of reptiles and birds which were nearly all unknown to every other part of the world. Of the twenty-five kinds of land-birds obtained by him (a number which has been increased by subsequent discoveries), all, with the exception of one, proved to be peculiar to the archipelago. Many of them were finches with remarkably broad beaks. Besides these, a remarkable kind of turtle, a gigantic tortoise, two extraordinary species of lizards, besides other kinds, and snakes, were found, all equally peculiar. The

nearest allied forms to these isolated species, as might *à priori* have been expected, are found in South America, from which the nearest islands are separated by a distance of only 140 miles. A fact which added to the interest with which these strange creatures were regarded by *savans* was the restriction of some of the species to certain islands of the group; the finches on one island being represented by species, allied to them but quite distinct, on another island. In endeavouring to find a clue to the explanation of these peculiar phenomena of geographical distribution, the great importance of the fact that the islands containing these separate forms were separated from each other by deep-sea channels, scoured by strong currents, had to be taken into consideration. The islands being volcanic, and rising from a deep sea, must have been separately elevated by subterranean forces above the surface, and can never have since been closely connected with the adjoining continent, or with each other. They have been peopled by their present stock of animal species at a very remote period,—sufficiently remote to have allowed time for much variation in the characters of the species. Thus an isolated development has been brought about, and the strength and direction of ocean currents and winds—north and south—have prevented all that inter-migration, which in other cases has effected an assimilation of productions between neighbouring lands.

3. *Seaports—Guayaquil.*

The most important ports of Ecuador on the Pacific coast are Esmeraldas and Guayaquil. When Pizarro and his companions landed at the latter place he found that the natives had no boats, but crossed the rivers and inlets of the sea with rafts, on which, however, they hoisted sails. This rude means of transport is composed of very

light stems of trees, and has continued to this day to be used in sailing along the coast. These *balsas* or rafts provide the market of Guayaquil with tropical fruits, amongst which the pine-apple is especially esteemed. Guayaquil lies in the fertile valley of the Guayas, whose lowlands are surpassed by few tropical countries for their rich and exuberant vegetable growth. The cacao of this district is second in quality only to that of Caraccas.

Guayaquil, a town with a population of 13,000, is built entirely of bamboo cane, a style of building that prevails everywhere along this strip of the Pacific coast, owing to the absence of suitable clay and water for preparing air-dried bricks. But with this modest architecture the natives make themselves very comfortable, and are safer than in stronger houses, for here earthquakes are of frequent occurrence, and do little or no damage to such structures. On the occasion of a severe shock that took place on December 6, 1856, Schmarda was unable to detect a single fissure in the reed walls of his house, lashed together with thongs of cowhide.

In Europe the natives of Guayaquil have been praised for their fresh complexion, and they deserve their reputation, considering their equatorial position. But the fair hair and blue eyes that travellers have spoken of will be sought for in vain. The number of the women exceeds that of the men, but only in consequence of the latter suffering more severely on the occasion of epidemics. Although arriving very early at maturity, the women are said here also to retain their freshness and vigour much longer than is usual in tropical climates, though some have ungallantly attributed this to their tendency to corpulence and free use of cosmetics.

The streets are paved, and even lit up at night. In the midst of European ways and comforts, the Asiatic style of the ecclesiastical architecture becomes doubly striking;

for even the churches themselves are made of nothing but bamboo and mud, while their low towers are provided with a series of terrace-like galleries, one above the other, which give them somewhat the appearance of pagodas.

4. *Scenery and Vegetation of the Interior—Peruvian Bark.*

From Guayaquil steamers ply for 70 miles up the Guayas as far as Bodegas (2000 inhabitants), whence the journey to Quito must be continued on horseback. The whole distance of 160 miles takes eight or nine days; but the way leads by the slopes of Chimborazo, through sublime mountain scenery and delightful valleys, amongst which that of Chimbo is especially celebrated. At this elevation the cultivation of wheat supplants that of the sugar-cane, while cacao and orange groves have given place, the one to barley, the other to clover-fields, lucerne, Indian corn, and beans. The neatly white-washed houses of the village of Chimbo look bright enough amidst their green surroundings when seen from a distance; but on a closer inspection they are found to be dismal dens, where neither a glass of milk nor a morsel of bread is to be had.

The same is the case with Guaranda, with a population of 2000, and situated at an elevation of 8840 feet above the sea-level. This is the centre of the Peruvian bark trade, which, however, will here soon be a thing of the past, as the trees are being rapidly destroyed by the wasteful way adopted of obtaining the bark.

The bark of the much-prized *Cinchona calisaya* is now no longer to be had, that of the *Cinchona succirubra* alone being at present procurable. This is a majestic tree, growing at times, though rarely, to a height of 60 feet, clothed with broadly oval, bright, dark-green leaves, and

bearing a white blossom emitting an aromatic fragrance. A trunk of 5 feet in circumference yields while fresh 1500 lbs. of red bark, which, however, when dried, is reduced in weight to 800 lbs. Most of the quinine is contained in the roots, though the branches are usually barked for commerce; the general yield being from 3 to 5 lbs. of the alkaloid to the quintal.

5. *Cuenca and its Inhabitants.*

A sort of contrast to the seaport of Guayaquil is presented by Cuenca, capital of the southernmost province of Ecuador, situated at an elevation of 8469 feet above the sea. In Guayaquil the uniform high temperature of equatorial latitudes prevails, the mean of the thermometer during the year being about 82°. In Cuenca the climate is one of perpetual spring, the mean of the year being 58°.

Here the houses are built of air-dried bricks, and have whitewashed walls, but as a rule they are unprovided with flues and chimneys. These are replaced by the *Cuslihutkus*, an Indian term fully descriptive of the thing itself, *cusli* meaning *smoke*, and *hutku*, *opening* or *aperture*. The pretensions to domestic comfort are otherwise extremely modest, beds, or rather a bed, being found only amongst the wealthy classes, all others sleeping on the ground, wrapped in their *ponchos*, and with a saddle for a pillow.

The city boasts, like most other towns of Spanish America, of an Alameda, or public promenade. It extends along the river *Pante*, but is, however, destitute both of trees and shade. Two stone bridges lead over the river to the Ejido, or Indian quarter, which, if included, raises the population of Cuenca to 20,000. Of these the majority are Mestizoes, with more or less mongrel blood, for

the pure descendants of the Spaniards are now rarely to be met with, forming, in fact, a species of aristocracy, and the women especially being distinguished by their handsome appearance and fresh complexion.

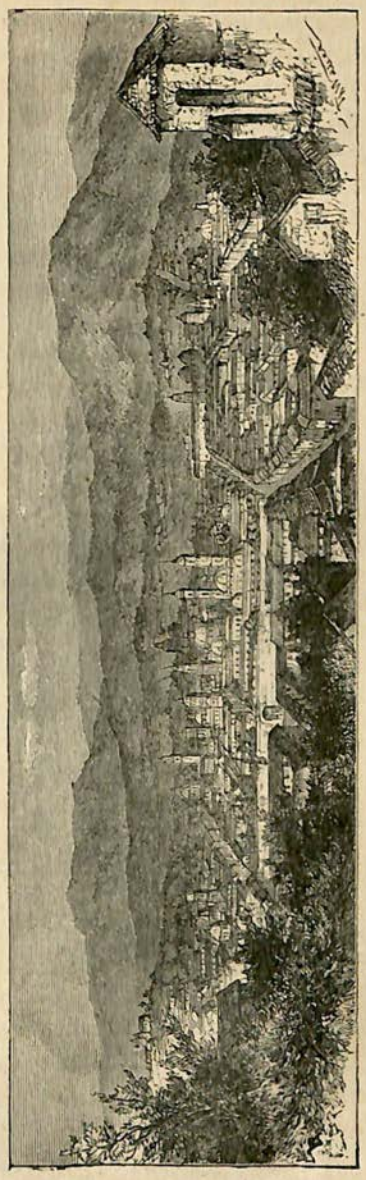
Cuenca lives pretty much all to itself, its citizens seldom straying away as far as Quito or Guayaquil. But when any one gets as far as Europe, or sends a son thither to be educated, he becomes an object of envy or respect, as the case may be, even in the fashionable circles. During the fasting periods of Advent, Lent, and so on, there is held a regular round of edifying discourses, meditations, prayers, fasts, and sanguinary flagellations. But in spite of these ascetic practices, public morals are at a very low ebb. The women are universal smokers of *papels*, or cigarettes, and when on their travels wear silk masks to preserve their complexion. As everybody must ride in Ecuador, all the women learn the art, and sit lightly and gracefully on horseback.

6. *Quito—Manners of the People—Industries.*

Quito, capital of the republic, lies at the great elevation of 9348 feet above the sea-level; its temperature is consequently so low, 55° being the mean of the year, that when people visit their friends of an evening they do not lay aside their cloaks in the reception-rooms. The air is of transparent clearness, and the sky of a dark indigo colour. The climate of the elevated plateau or valley, at the northern end of which it is situated, lying between the main ranges of the Cordilleras, is unfavourable to cultivation, and the neighbourhood produces little besides maize and a few garden vegetables. The valley of Quito is as destitute of trees as Palestine; yet Quito is to be envied for its fruit market. As several routes lead from this table-land down to the tropical zone, here

are to be found not only the most juicy strawberries and blackberries, but also oranges, peaches, cherries, bananas, pine-apples, cherimoyas, and other delicious fruits of the tropics. To all this the snowy dome of Mount Pichincha, close at hand, adds the material wherewith to prepare the choicest ices.

Quito is laid out in the form of a perfect square, and may feel prouder of its churches, built in the Renaissance style, than of its ill-paved streets. One-fourth of the city is covered by convents and churches. Of convents alone there are fifty-seven. Apartments furnished after the European manner are common enough in the dwellings of the better classes, but an exceedingly uncomfortable impression is produced by the absence of window sashes, as well as by the tumble-down state of most of the houses.



QUITO.

The population amounts to 80,000, consisting first of all of the so-called white Creoles, of whom, however, not more than half-a-dozen are of pure Spanish blood; then of about 10,000 unmixed native Indians, nearly all the rest being Mestizoes or Cholos. The most enterprising section of the white community are the Colombians, the "Quiteños" themselves being deficient in energy. The mechanical trades are in the hands of the half-caste Indians, a most unreliable class. The fair sex is here also in excess of the male, but nowhere else are so few repulsive features to be seen. On the other hand, however, striking beauties are somewhat rare, and the ladies of Quito may on the whole be rather described as pleasing than handsome. Grace, dignity, complete self-possession, an unaffected noble carriage, and considerable conversational powers, would enable them to shine in any society, but for their utter want of education and instruction. Travellers have remarked that, to judge from the somewhat lax tone of their conversation, a greater license of manners might be supposed to prevail than would seem to be really the case. In public the women wrap their mantillas or shawls round their head and shoulders, in such a way as to leave nothing of the features exposed except one eye. The shawl is kept on even in the houses, not so much for the sake of the warmth as to conceal the slatternly state of their toilet. Gloves are never worn, and stockings are unknown, shoes being slipped on the bare feet.

Foremost amongst the industries of the place is the mechanical fabrication of oil-paintings, mostly religious subjects, which are paid for at so much the square foot of canvas. Another very important article, prepared mostly for the benefit of strangers, are the dried skins of birds, especially those of humming-birds, brought in from all parts, but chiefly by the Indians from the river Napo, east of the

Andes. These lovely little creatures are shot down with

MARKET SCENE IN QUITO.

blow-pipes, and their skins prepared with arsenical soap, though the natives along the Amazons use pepper for this

purpose. The Indians also bring to Quito the well-known vegetable ivory nuts, out of which the local artists carve somewhat rude little figures, which are painted and sold to the country people.

7. *The Animal Kingdom—Caymans—The Peccary.*

In the slime and ooze of the rivers along the coast of Ecuador caymans are met with in vast numbers, and these daring reptiles approach the neighbourhood of human abodes, whence they carry off men and beasts. Ecuador, however, otherwise presents but slight attractions for the sportsman. Amongst the native game are pachydermatous animals of the peccary order, including the *Tajaçu* (*tai-assu*), a kind of hog peculiar to the forests of tropical America, of which several species are found in the low-lying regions east of the Andes.

Of the peccary there are two species in Ecuador, the *Seinos* or *Scynos* and the *Tatabra*. Of these the seynos is the larger, though not equal to the European hog in size. Notwithstanding the excellent pasture afforded them by the abundance of nuts of various kinds in the woods, they never grow really fat. On their back, in the neighbourhood of the kidneys, they have a round sac about the size of half an orange, with a little opening above, which, with a sort of coarse irony, is by the natives called their musk-bag, but which really secretes a most powerful, fetid humour. The stench is so strong that even man, with a fair wind, can scent this game from a long way off. It is much less perceptible when the animal is undisturbed, but in his flight he is able by its means to envelop himself in a most pestilential odour. Fortunately, however, the sac lies in the skin, whence it can be easily extracted, and this must be done as soon as the peccary is knocked over, else the flesh becomes tainted and disagreeable to the palate.

The boar is provided with a strong and sharp tusk, and the little "porkers" are of a ruddy brown colour, and do not squeak like their European cousins, but utter a cry exactly like that of little children.

8. *Flora—Cacao or Chocolate Plant.*

The noblest product of Ecuador is its cacao, the value of which has risen considerably, even with a rapid increase in the quantities exported. The tree itself belongs exclusively to the tropical zone, growing more particularly in the lowlands. There is needed a hot moist soil and shade for the young cacao tree (*Theobroma cacao*), in order to flourish vigorously. Hence the low-lying districts of Ecuador are admirably suited for its cultivation, which has become one of the chief industries of the inhabitants. Here the white or best species is still met with in its wild state, and is peculiar to these regions.

9. *Region of the Napo River.*

The least known and least frequented district of Ecuador is the territory called "del Oriente," on the eastern side of the Cordilleras. This region, lying between Quito and the Amazons, is watered by the great rivers Napo, Pastaza, and Morona, and their numerous tributaries, which flow through a forest of remarkable luxuriance and impenetrability, inhabited by various tribes of Indians. This woodland region is a continuation of that farther south, and known in Peru as *la Montaña*. The Ecuador Montaña is, however, more abundantly watered, for the climate is one of excessive humidity and continuous rainfall, and the few pathways are often impassable for mud and swamp. The trees are somewhat higher than on the Lower Amazons, and rise perfectly straight from the prolific soil. Their

shady branches are covered with long hoary mosses and countless parasitic and epiphytous plants of the pine-apple (Bromeliaceæ and Tillandsiæ) and orchideous families.

NAPOS INDIAN.

10. *The Quijos, Zaparos, and Jivaros Indians.*

Here dwell the half-christianised Napos or Quijos, and the peaceful Zaparos, besides the turbulent Jivaros Indians.

The Napos are governed by district overseers, who, though appointed in Quito, are really under the control of the clergy. The natives are monogamists, marriages being contracted usually between the sixteenth and seventeenth year. Their principal food consists of the root of the yuca,

a kind of mandioca or cassava, which is prepared in a variety of ways, being sometimes roasted, sometimes ground to meal, and at others taken as *chicha*, that is as a fermented drink or beer, by simply chewing the root and adding water to the accumulation of ejected saliva. The different kinds of monkey, which abound in the forests, the *Manati* or "sea cow," and the peccary besides fish, form the chief animal food of these people. The dress of the men consists of a loin cloth, while the women wear a short frock or petticoat, supplemented on gala days by trousers and *ponchos*. The brunt of the day's work is borne by the women, the men amusing themselves with a little hunting, and a very long rest in their hammocks after the fatigues of the chase. But when the dames are tired of their husbands, they generally give them a draught of *floripondio*, a decoction of the *Datura sanguinea*, a plant somewhat resembling the stramony, or *Datura stramonium*, with which the priests of Delphi sought inspiration for their oracular utterances. If this produces the desired effect, and her victim falls a prey to cretinism, his wife proceeds forthwith to contract a second matrimonial alliance.

The blow-pipe, elaborately made of two half-cylinders of wood ten feet long, grooved inside, and then bound together, is the favourite weapon both of the Napos and the Zaparos, whose features, as is so often the case in the South American Indians, bear a striking resemblance to the Mongol type. The Jivaros, on the contrary, probably owing to a mixture of Spanish blood, have the so-called Caucasian expression of countenance, and have developed a beard. This tribe also carries shields and lances, with three-pointed poisoned spears. On the tops of the hills they have stations, with drummers and scouts, whose preconcerted shrill signals, heard a long way off, soon rally the tribe to arms. Amongst them is also found the

strange practice, met with sporadically in every part of the globe, called the *Couvade*, which requires the husband, after child-birth, to take the place of the wife on the sick couch (here the hammock) and allow himself to be nursed and fed with dainty morsels. The custom of exchanging or bartering wives is here also practised.

11. *Theocratic Government—Exceptional Relations of Church and State.*

The exceptional political condition of Ecuador calls for more careful consideration. Here the rivalry which has existed more or less in all the Spanish American Republics between the Ultramontane priestly faction and the party of modern progress, has, for a long period, been settled in favour of the former. Consequently the priesthood have had it all their own way, and a strong theocratic element has been introduced into all departments of the State. How far this has been changed since the assassination of the clerical president Garcia Moreno, in August 1875, we are unable to say; but it is difficult to believe that in so brief an interval the more enlightened party of progress can have succeeded in bringing about a complete severance from the traditions of the past.

The spirit that prevailed in the council chambers of this State is well seen in the highly instructive address with which President Garcia Moreno opened Congress on August 10, 1873. The message, tricked in all the cant phrases dear to a narrow sacerdotalism, informs the public that at the foot of Chimborazo, in theocratic seclusion from the outer world, there exists a State, wholly and alone devoted to the service of the holy church, which, guided by the wise teachings of its most trusted servants, the followers of Loyola, is marching onwards to happiness and prosperity. In thankfulness for which

great blessing, Congress is now invited to revoke the last lingering civil rights that have struggled on from the wreck of the old Spanish constitution, and it is asked to hand over the country to the unrestricted activity of the fathers. "As we have, once for all," runs the message, "the happiness to be Catholics, let us be so frankly and consistently, not within the domestic hearth alone, but in our political life also; and let us approve the earnestness of our feelings and professions by the public testimony of our deeds. Let us expunge from our statute books the last traces of unfriendliness towards the church; for in them are still to be found some measures derived from the old oppressive privileges of the Spanish crown, which further to endure would be a shameful inconsistency, a deplorable abnegation of our principles."

As a sample of this kind of legislation, it may be mentioned that the army was divided into four divisions, bearing the blasphemous titles of "Division of the Son of God;" "Division of the Good Shepherd;" "Division of the Holy Lancers of Death;" and "Soldiers of the Blessed Virgin"—all placed under the sceptre of the "Sacred Heart of Jesus" as the national emblem. Moreno, however, was General-in-Chief, and to him, as well as to holy church, every soldier was bound to take the oath of allegiance.

In the same spirit was directed the policy of the Board of Trade, one of its measures strictly forbidding the introduction and divulgation of objects opposed to dogma, morals, and religion, or, in other words, all books and periodicals unsanctioned by the Jesuits. The press and the whole book trade were thus consigned bodily to their exclusive control, and it need scarcely be added that "the fathers" allowed just so much of the progressive spirit of the age to filter through to the people as seemed good to them.

12. *Material Progress—The Jesuit College—Spread of Education.*

Yet we are assured by a modern observer that it would be difficult in this tropical land to perceive anything of the evil results which have attended and still attend Jesuit influence in Europe. Moreno's administration even enjoyed the general approval of all impartial witnesses. The American, James Orton, is even full of his praise for projecting those comparatively grand routes and causeways in districts where all intercourse had been hitherto impeded, and often rendered impossible, by swamps and mountain gorges.

But even apart from the little army of 1200 men, a creation of the same President so different from the playing at soldiers of previous governments, and apart also from the erection of so many public buildings and the general improvement of the capital, one point to his credit cannot be overlooked, and that is, the number of schools which he opened in Quito and Guayaquil, and especially the Polytechnic School of the capital.

Of special interest to foreigners is the Jesuits' College, within which are comprised the university, the old astronomical observatory, a library of 20,000 volumes, a seminary, and a museum. A new observatory is now all but complete, and the foundations have been laid for an extension of the seminary. But the chemical and physical laboratories, with their excellent arrangements and rich collection of apparatus, cannot fail to produce the greatest astonishment, especially when we remember that nearly everything had to be conveyed at enormous cost and endless labour through an extensive wilderness, from the seaport of Guayaquil to Quito, at an elevation of 9348 feet above the ocean-level. The museum is not

yet finished, but already contains a handsome geological collection, and especially a considerable number of foreign specimens, mostly from Paris.

13. *Public Highways—Mining and Agricultural Operations.*

Besides the instruction of the youth of Ecuador, entirely in their hands, the priesthood have not overlooked more immediately practical undertakings. The highway to Macas (Provincia del Oriente) is one of their works. But, speaking of Ecuador generally, it may be said that there are no highroads of regular construction. Reports of their mining and other operations in the east amongst the above-mentioned Jivaros, a tribe unpleasantly hostile to the whites, reach Quito from time to time. Nor is it, perhaps, an unreasonable assumption to believe that the administration will no longer be able to find governors for this province, now that the competition of the missionary priests and their protection of the Indians will prevent these gentry from realising any great profits out of Indian labour, and the gold, cinnamon, and india-rubber of the country.

Altogether, a careful inquiry into the state of affairs in Ecuador makes it evident that, however abnormal the clerical element may appear to be, the condition of the people itself is not a whit worse than it is in the neighbouring Republics of Peru, Bolivia, Venezuela, or any other, with the single exception of Chilé. But although Ecuador, in the enjoyment of a certain order, long had an advantage over other parts of Central and South America, this oppressive quiet has lately been disturbed by revolutionary movements.

CHAPTER XV.

PERU.

1. *Extent—Population—Climate.*

AMONGST the states along the Pacific seaboard of South America, Peru ranks first in point of extent, having an area of no less than 503,364 square miles. Excluding the Indians, its population may be estimated at about 3,000,000.

"In no part of the world," says Mr. Squier in his recently-published work on Peru, "does nature assume grander, more imposing, or more varied forms than here. Deserts as bare and repulsive as those of the Sahara alternate with valleys as luxuriant as those of Italy. Lofty mountains, crowned with eternal snow, lift high their rugged sides over broad bleak *punas*, or table-lands, themselves more elevated than the summits of the Alleghanies. Rivers, taking their rise among melting snow, precipitate themselves through deep and rocky gorges into the Pacific, or meander, with gentler current, among the majestic Andes to swell the flood of the Amazons. There are lakes, ranking in size with those that feed the St. Lawrence, whose surfaces lie almost level with the summit of Mont Blanc."

The greater part of the coast-line presents a bare and forbidding aspect. In Ecuador it rains at least on the coast, and the road lies through shady woodlands up to the higher regions of the Cordilleras. But in Peru,

although the sky is mostly overcast, it never rains, as the vapours arising from the Pacific are rarefied and wafted over the superheated low grounds away to the Andes, on the upper slopes of which they are condensed and precipitated, forming the head waters of the numerous short rivers which descend through the arid strip of coast-land to the Pacific. There is nothing in the coast plains and valleys but a strong nightly dew, especially in winter, just enough to call forth a light, bright vegetation, only too soon again burnt up by the sun.

2. *Sublime Coast Scenery.*

Hence the seaboard itself is perfectly bare and lifeless, except for the narrow green strips along the streams; and the seaports, such as Payta, Lambayeque, Truxillo, Callao, Pisco, Islay, Arica, and Iquique, are all situated in arid treeless districts. Immediately beyond them the land begins to rise, and here again we find vast tracts of barren wastes.

Yet the spectacle presented to the stranger on landing is enchanting. His gaze is at once and above all irresistibly fascinated by the gigantic range of the Cordilleras, here apparently rising sheer out of the water, with all their steep, precipitous rocky walls and jagged crests, varied here and there with deep, sharply-defined mountain gorges. By the side of these huge masses, piled one above the other, the mighty giants of Ecuador seem almost insignificant, not rising, as in Peru, directly from a plain on the sea-level, nor being at once visible in their full extent from base to summit. The outlines of these enormous ranges rise one behind the other in the blue, hazy distance, a wild and confused chaos of crests, ridges, rugged crags, and clefts, between which here and there hover dark, lowering masses of clouds banked up against the

mountain sides. And when one of these is occasionally rent asunder, there are disclosed to the view broad and glittering snow-fields, beyond which lie still other and far more distant jagged peaks, towering to amazing heights—supreme giants amidst the chaotic surroundings.

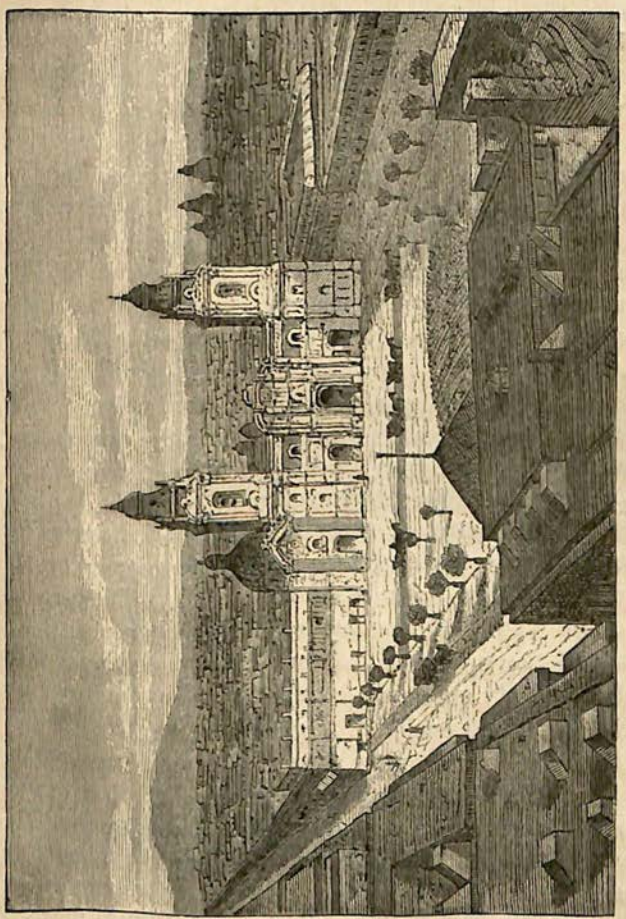
3. *Lima—Its Inhabitants, Buildings, General Aspect.*

At present several of the seaports, including Lambayeque, Callao, Pisco, and Islay, are connected with the land in the background by means of short railways, amongst which the most important is that running between Callao and the capital, Lima, at a distance of seven miles.

Lima, with its 160,000 inhabitants, lies in the neighbourhood, or almost at the very foot of the coast range of the Cordilleras, their first spurs rising with their dark masses immediately above the flat roofs of the houses. On scaling one of these heights, mostly adorned with crosses, we get a commanding view of the city, laid out like a chess-board, and varied by the numerous intervening churches with their twin towers, conspicuous amongst which is the fine old Spanish cathedral on the "Plaza Mayor." The often really magnificent inner courts of the more aristocratic quarters are also taken in in this birds-eye view of the place. But what imparts to Lima quite a characteristic aspect, are the countless little square structures on the flat roofs, provided with trap-windows, and serving both for ventilating and lighting the interior.

It is altogether a picture painted *en grisaille.* Gray are the blocks of houses, gray the churches and cloisters, gray the hills, whose cloud-capped summits alone are clothed with a scarcely perceptible light green mantle of grass. The sky itself seems to partake of this monotonous

gray tone, being overcast almost from one end of the year to the other. And yet scarcely a drop of rain ever falls, though there is now and then a strong dew, as may



LIMA CATHEDRAL.

be perceived of a morning by the still moist mud roofs. A good shower would convert the whole of Lima into a

shapeless mass of mud, all the buildings with few exceptions being made of this material rough-dried in the sun.

Before us lies the broad plain that has been rapidly crossed by the train on our way from Callao hither. Close by the sea, whose white surf encircles the whole coast-line as with a girdle of foam, is situated Callao itself, with its houses overtopped by the tall masts of the ships in the harbour. Here and there we see at our feet gardens and pleasure-grounds, artificially irrigated, their dark, almost dusky green, tints, agreeably contrasting with the light yellowish-gray of the arid hills. Here also lies the "Paseo Publico," or public promenade, with its superabundance of vases, all arranged in a straight line, their dazzling white also sharply contrasting with the dark foliage of the trees which flank the wide thoroughfare.

In the Plaza Mayor, forming, as is usual in South American cities, a perfect square, towers the wondrously beautiful cathedral, with its lofty portals rich with the reminiscences of Moorish architecture. Covered colonnades, beneath which wares of every imaginable description are exposed for sale, enclose three sides of the square, varied above and below with restaurants and billiard-rooms, ice shops and the counters of money-changers. The centre of the square is laid out in a perfectly circular garden, lavishly ornamented with fountains, statues, and marble seats, and enclosed by gilt iron rails.

The streets are mostly narrow, as a protection against the heat. In the places where the water, flowing in open channels, deposits little heaps of refuse, the carrion kites may be seen in flocks, constantly hopping about and squabbling together, heedless of the passers by, from whom they have nothing to fear, their lives being protected against destruction by legal enactment, and the punishment of offenders by severe penalties. These *gallinazos*

are in truth a real blessing for the city, and for this filthy country generally. Wherever they scent the least refuse of any sort, it is gobbled up in no time. And they present a curious sight when, after a hearty meal, they perch for hours together, with outspread wings, on the house-tops and flagstaffs.

4. *Foreign Element in Lima.*

The monotonous appearance of the straight lines of street is also relieved by the varied forms of the balconies projecting from the houses, the elegant shops owned by strangers from every clime, and the inevitable *Tiendas* and *Pulquerias*. The tiendas are mainly in the hands of Italians, of whom there are said to be upwards of 14,000 in Lima. There are also a good many Germans and Frenchmen, the latter, true to the national instinct, being mostly hotel-keepers, perfumers, and owners of coffee-houses and fashionable establishments. The English, on the contrary, are to be found principally in Callao, where the shipping interests are centred. All the heavy trade is in the hands of strangers, the native Peruvians not even attempting to compete with them, in this presenting a decided contrast to their Chilian neighbours, who more than hold their own against their European rivals.

5. *The Blacks, Cholos, and Chinese Coolies.*

Nowhere is there to be seen a more motley population than that met with in the crowded streets of Lima. The main elements are the Whites, Indians, Blacks, and Chinese, but the different shades of the various cross-breeds between these races can neither be enumerated nor described, so thoroughly intermingled have they all become one with another. The contingent supplied especially

by the *Cholos*, half-caste Indians and Blacks, has undergone profound variations, and it is this class that mainly swarms in the squalid and notorious slums of the suburbs.

A number of vessels convey every year crowds of Coolies from China to Callao. These wretched creatures are obliged to bind themselves by contract for eight years, at a very low rate of remuneration, to the *hacendados* or planters, after which they again become their own masters. They are treated more or less as slaves, which, strictly speaking, they really are, there being no legal impediment of any sort to their sale, or rather to their being consigned to any third party. Slavery has no doubt been long abolished, one might almost feel tempted to add more is the pity, seeing that it is precisely the lazy free Blacks themselves who now render the suburbs and neighbourhood of Lima so unsafe. The most marvellous stories are current regarding them, and were they but guilty of half of what is said, it would be the merest foolhardiness to venture on the shortest walk outside the city. It is at least certain that since the abolition of capital punishment, the insecurity of Lima has increased to a frightful extent, occasioned mainly by the enfranchised Blacks, who form altogether the most ruffianly element in the place.

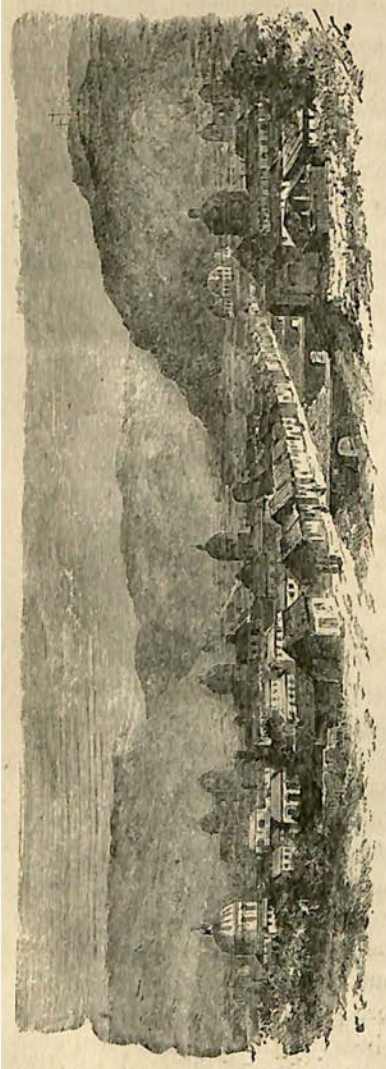
The imported Chinese are, on the contrary, uncommonly shrewd and thrifty. They are, doubtless, obliged to work out their contracts; but owing to their extraordinarily saving habits, they find themselves at the expiration of their term of service in possession of nearly the whole amount of their well-earned wages. The dream of the Chinaman is almost invariably to become the proprietor of a *fonda*, that is, an eating-house of the lowest type, and he is no sooner free than he sets about fitting one up, under some extravagant name and with a

fantastically-painted sign over the door. And it must be confessed that those who are not too squeamish, or do not pry too nicely into the kitchen or the contents of the pot, have little to complain of in the arrangement of these fondas, at least so long as their main object is to eat and drink at as little outlay as possible. Countless are the Chinese fondas, both in Lima and Callao, their little cloth-covered tables being mostly patronised by the Blacks and Cholos of all races and colours, and very rarely by the Whites. As many as forty and more of these tables will often be seen, crowded together in a small room reeking with the odour of the culinary preparations. Nevertheless, these "Celestials" are hated with a bitterness not to be believed, of course because they are not Christians, but only heathens or apes, which the Peruvian includes in the same category. They call them *Macacos* (monkeys), and yet these poor devils are in reality immeasurably superior to the good-for-nothing Negroes and rascally Cholos, who look down on them with so much contempt.

6. *Cuzco—The Ancient Capital of the Incas.*

The really historical city of Perù is not Lima, but Cuzco, the ancient residence of the Incas, who, before the Spanish conquest, had here established a powerful State on the basis of a theocratic patriarchal communism. Cuzco, which word means *navel*, lay in the very centre of their kingdom, in 13° 30′ south latitude, in a small valley encircled by lofty hills. Such valleys, aptly called by the Spaniards *bolsones*, or pockets, are frequent in the elevated land between the two parallel ranges of the Andes. They lie at various elevations, and being always more fertile in soil and more genial in climate than the bleak higher-lying *punas*, became the seats of the indigenous civilisation of the ancient Peruvians.

But the Cuzco of the present day consists of a somewhat irregular square, running from N.W. to S.E., and divided into two unequal parts by the Huatany, a wild mountain torrent rushing down from the Cordillera de Sapi. Of its 3000 houses, sheltering some 40,000 inhabitants, one-third at least are mere hovels, and of these again fully one-half taverns. At the same time, there is no lack of churches and convents in Cuzco, any more than in other towns where the Spanish element has been dominant. These sacred buildings have all a certain gloomy aspect, which, however, harmonises well with the rough climate, the often lowering skies, and the frowning hills of the neighbourhood. In the interior they mostly present an extremely simple style of architecture, though otherwise richly endowed with gold and silver vases and ornaments, often profusely laden with precious stones.



CUZCO.

7. *Climate of Cuzco—Manners and Habits of the People.*

The climate of Cuzco and the surrounding country cannot be praised. It is certainly not, like that of Lima and the low-lying coast-lands, exposed to the scourge of yellow fever. But, on the other hand, the cold punas give occasion to the *soroche*, a disease prevalent in the hilly regions that has not yet been sufficiently understood, and which, in the higher uplands and passes of the Andes, ends fatally for those not blessed with sound lungs. Here also, in contrast with the rainless coast districts, there is no lack of hail, rain, and snow, so that, as the local saying expresses it, it rains in Cuzco thirteen months in the year. Yet, neither stoves, fireplaces, nor braziers are here to be seen. In damp and cold weather, the señoras wrap themselves in their woollen mantles and veils, the caballeros in large cloaks. The Indians of both sexes also wear woollen shirts and upper garments, besides long and short cloaks.

8. *The Quichua and Aymara Indians.*

The inner man in all the cities is comforted with copious draughts of European liqueurs, *chicha* and rum. Living under such lowering skies, with cold and damp winds mostly prevailing, the people are not overfond of indulging in cold baths, or indeed in ablutions of any sort; the Indian simply dispenses with them altogether, even looking on the washing of face and hands as a sort of luxury. He, moreover, lies down in his clothes, which, indeed, he puts on once for all, and wears till they drop off. This is true of both sexes, and the Indian women show great reluctance to lay aside their old rags, wearing their new clothes over three or four old garments, which are never cleaned, and consequently swarm with vermin.

Yet the dress of the Peruvian Indians, mostly of the Quichua and Aymara tribes, is very picturesque, presenting a charming sight as they drive the great herds of llamas through the streets, or are seated with their young wives on the hill-side. Their melancholy national airs, sung

NATIVE PRIESTS.

to the accompaniment of the guitar, and sounding so sadly across the quiet landscape, and the wearied, downcast expression with which they gaze wistfully down on the ruined fastnesses of their forefathers, as they tend their flocks on the mountain slopes, impart to these sorely injured tribes a special interest, such as many more favoured peoples fail to inspire.

9. *The Native Clergy.*

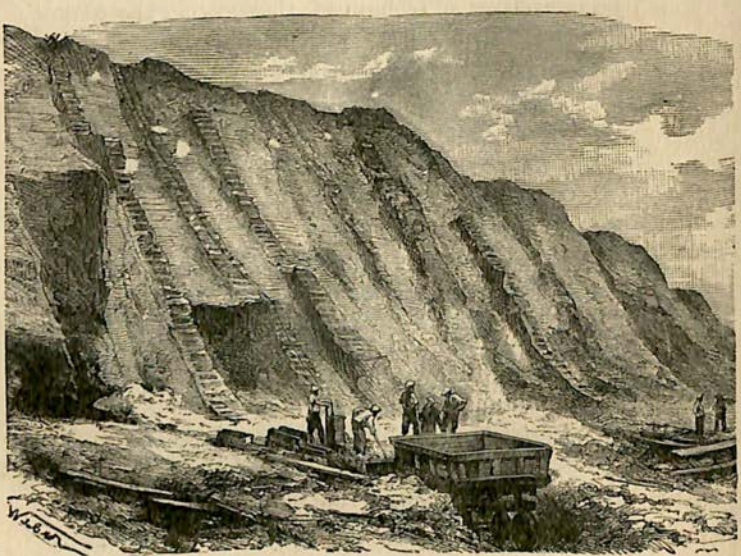
A great influence is naturally exercised over the Indians by the clergy, mostly belonging to their own class The priests are thoroughly imbued with a worldly spirit, and lead a very jovial life. Their education is not of a very wide range, but they still look after the instruction, such as it is, of the youth. Some also venture even to meddle with scholastic and mystic theology, or canon law, though perhaps after a fashion of their own. In everything pertaining to morals and the ordinary decencies of life, the South American clergy has its own ideas and opinions, which are certainly somewhat at variance with those usually entertained in Europe on such matters. The majority of the priests are natives of the country, either pure-blood Indians or half-castes.

10. *Fauna—The Guanaco, Llama, and Vicuña.*

Situated in the tropical zone, Peru contains all those products of the animal and vegetable kingdom, domesticated or cultivated, that we have already noticed as met with in Colombia and Ecuador. In addition to them it has some indigenous species of its own. On the Peruvian *punas* grazes the huanaco or guanaco (*Auchenia huanaco*), which roams in flocks along the slopes of the Andes, from this region southwards to Patagonia. The llama or alpaca (*Auchenia lama*), belonging to the same camel-like family of ruminants, and which has now been entirely domesticated in Peru and Chilé, yields milk, flesh, wool, leather, and serves also as a beast of burden, even the dung being used as fuel. The dwarf llama and the vicuña (*Auchenia vicunia*) are esteemed for the quality of their wool or hair, which is exported in considerable quantities to Europe, and manufactured into a durable cloth of glossy, silk-like surface.

11. *Mineral Wealth—The Guano Trade—Cotton.*

Peru possesses, moreover, incalculable wealth in its nitre and guano deposits, both of which are of extreme importance as manures. The yield of guano has certainly fallen off during the decade between 1865 and 1875, but that of nitre has increased fourfold.



GUANO BEDS.

The richest guano deposits were those on the Chinchas, a dreary, desert group of rocky islands in the neighbourhood of Callao and Pisco. The guano beds are worked downwards, the material being removed in layers and placed on large flat trucks, and so conveyed on trams partly to the *molo* or shipping wharf, and partly to the edge of the steep cliffs, where it is shot over into large barges, and thence

transferred to the numerous vessels engaged in the trade, and which are usually anchored off the islands. The pungent ammoniacal dust, occasioned both by the digging and loading operations, and to which the mucous membrane of the nostrils is keenly susceptible, renders a residence on these islands exceedingly unpleasant. Yet, besides the utterly wretched *ranchos* of the Chinese and coloured workmen, the islands boast of some remarkably elegant villa-like residences, and a photographer has even been known to have plied his artistic trade in the place.

In 1873 the export of guano from these deposits amounted to 100,000 tons, and operations were being also carried on in the Guañape and Macabi islands. But there remain still untouched the rich beds on the Lobos and Viejas groups in Independencia Bay, those of the Lobillo and Huanillo groups in Chiapana Bay, and others at Punta Alba and Pabellon de Pica. Of smaller deposits no less than thirty-six have been discovered. According to the best authorities, however, the total supply will be exhausted in a very few years.

The attempt to cultivate cotton has proved very successful; the coast region of Peru would be excellently well adapted for the growth of this plant, if labour were more available for irrigating purposes. If this difficulty could be surmounted, we may imagine what splendid crops might be raised in a country where there is no rain to damage the ripening fruit.

12. *Government—Revolutions—Peculation.*

Notwithstanding all its natural advantages, Peru suffers under the stigma of being one of those States in which mal-administration and revolutionary disturbances succeed in preventing the country from attaining that position of importance and prosperity to which it might otherwise

have been raised. It enjoyed, previous to the late disastrous war with Chilé, an enormous revenue. Without reckoning its customs and other dues, it derived a net yearly profit of from £4,000,000 to £5,000,000 from guano alone. The total revenue in 1875, chiefly from guano, amounted to £10,220,000. This large income enabled it to meet the regular State expenditure, while the rest was unfortunately squandered, vast sums having been especially swallowed up in constructing long and costly railways before they were required by the exigencies of traffic, and unknown amounts embezzled by dishonest functionaries. Peru is amply provided with such official gentry, whose paramount aim in life is to live without honest work and secure as much as possible of the superfluous revenues of the country for themselves. Government offices being veritable gold mines, there were naturally always to be found a number of candidates for such places, who were not at all particular as to the means they employed to gain their point. But this was best effected by joining one or other of the parties or factions, whose sole object was to thrust aside the President for the time being, in order to set up their own candidate in his place. As a matter of course, when they succeeded in accomplishing this, all important and profitable offices changed hands, and on these occasions, expectant members of the triumphant faction, mindful of Goethe's saying, were not over modest in urging their own claims on the gratitude of those in high places.

13. *Recent Improvements—Public Works—Railways—Disastrous Result of the war with Chilé.*

Previous to the war with Chilé a temporary lull in the stormy atmosphere of "politics" gave the country time to recover from the ruinous effects of revolutionary

THE RAILWAYS OF PERU.

Salinas Promontory
Callao
LIMA
Chancay
Huacho
Huaura
Supe
Barranca
Pativilca
Huarmey
Casma
Chimbote
Huanchaco
Pacasmayo
Eten
Payta
Sechura
Bay
Huanchipaire Ind.
Machiri Ind.
Pearaya Ind.
Guaraya Ind.
Andes Ind.
Chunchos
Cashibos
Piros
Conibos
Sipibos
Cocamas
Omaguas
Yurimaguas
Moyobamba
Chachapoyas
Huamachuco
Cajamarca
Jaen
Huancabamba
Tumbez
Guayaquil
Quito
Rio Napo
Rio Pastaza
Rio Morona
Rio Huallaga
Rio Ucayali
Rio Pachitea
Rio Perene
Rio Tambo
Rio Apurimac
Rio Mantaro
Rio Pampas
Rio Santa
Rio Marañon
Rio Huallaga
Rio Huayabamba
Rio Chinchipe
Rio Tumbez
Rio Zarumilla
Rio Chira
Rio Piura
Rio Chancay
Rio Chillon
Rio Rimac
Rio Lurin
Rio Mala
Rio Cañete
Rio Pisco
Rio Ica
Rio Grande
Rio Nasca
Rio Acari
Rio Yauca
Rio Ocoña
Rio Camana
Rio Majes
Rio Colca
Rio Vitor
Rio Chili
Rio Quilca
Rio Tambo
Rio Moquegua
Rio Locumba
Rio Sama
Rio Caplina
Rio Uchusuma
Rio Desaguadero
Rio Pucara
Rio Ramis
Rio Huancane
Rio Coata
Rio Ilave
Rio Suches
Rio Tambopata
Rio Madre de Dios
Rio Beni
Rio Mamore
Rio Itenez
Rio Guapore
Rio Paraguay
Rio Madeira
Rio Purus
Rio Javary
Rio Yavari
Rio Yacuma
Rio Mayo

strife. Sources of income independent of that derived from the guano trade had been applied to meet real public wants, and during this interval of peace the customs rose greatly in value, while the President, General Prado, carefully administered the public funds, having an open hand only for the educational interests, which so recently as 1870 were painted in the gloomiest of colours. Attention was also turned to useful public works, although the construction of railways was rather prematurely pushed on in some parts of the country. The costly Oroya line, with its coast terminus at Callao, laid over both ranges of the Cordilleras, with its stupendous gradients and zigzag windings up the mountain slopes, is assuredly one of the grandest engineering undertakings in the world. Another line, in the south of the republic, connecting the Pacific port of Mollendo, *viâ* Arequipa, with Puno on Lake Titicaca, is also a great engineering work. It is 277 miles in length, and is so contrived as to traverse this great extent of mountainous country without tunnels of greater length than 300 feet. Steep cuttings, superb viaducts, and reverse tangents, up rough and steep slopes to heights of 14,600 feet above the sea-level, are amongst the features of this bold undertaking, which will bring the temperate regions of the elevated Titicaca and the Bolivian cities beyond, within easy reach of the Pacific Ocean. For a country circumstanced as Peru is the development of the means of internal communication is a vital question, and these railways, although causing at first a ruinous expense, will in future be of enormous utility. Next in importance to means of communication, is the question of the artificial irrigation of the extensive rainless districts along the Pacific seaboard.

During the previous twenty years the Peruvian government also devoted much attention and no inconsiderable

portion of its pecuniary means, to the development of its immense territory in the plains of the Amazons east of the Cordilleras. Both banks of the main river for the first thousand miles belong to the republic, as well as the entire courses of its earliest tributaries from the south and the lower portions of those from the north; the whole of the region being an alluvial plain of vast productiveness, but almost destitute of civilised inhabitants. In 1851 a treaty was concluded with Brazil relative to the free navigation of the Amazons by Peruvian vessels between the Atlantic and these interior districts; and since 1862 the great fluvial highways within Peruvian territory have been regularly traversed by steam-vessels, in conjunction with the lines of Brazilian steamers plying between the Atlantic port of Pará and the Peruvian frontier. A floating dock and workshops for the repair of steamers, with factories for other works, have been established at Yquitos, and numerous small steamers, under competent naval officers, have surveyed all the neighbouring tributary streams. One of the most important of these surveying expeditions was that undertaken in 1866 by Don Benito Arana, with three steam-vessels, with a view of ascertaining how far the tributary streams were navigable in the direction of Lima. Ascending first the Ucayali, which was found for 600 miles to have an average depth of water of 6 to 12 fathoms, with a current of only two to three miles an hour, the expedition entered the Pachitea, a tributary from the west. This stream they navigated for a distance of 204 miles, at which point, although a sufficient depth of water existed, their progress was somewhat impeded by the narrowness of the channel, which was in some places only 80 feet broad. From the Pachitea the steamers passed into the Palcazu, on the banks of which is situated the village of Mayro, the nearest point to Lima at which this colossal fluvial system commences to be

navigable. The largest of the three steamers was unable to reach this port, but the two smaller ones found no difficulty; thus proving the Amazons and its tributaries (by the nearest route to Lima) to be navigable for 3623 miles, and to within 325 miles of the Peruvian capital.

The further development of their trans-Andean territory and the magnificent new routes for trade thus opened out, as well as other interests of the country, were seriously damaged by the failure of the Government to meet its obligations to its foreign creditors by paying the interest on the external debt of the country, a debt which reached the large amount of forty-nine millions of pounds sterling. Since then came the war in which it embarked, in alliance with Bolivia, with Chilé, in which it has sustained crushing defeat by land and sea, and the end of which has not yet come.

CHAPTER XVI.

BOLIVIA.

1. *Population—Extent—Mountain Systems.*

BOLIVIA, with a presumed population of from 2,000,000 to 2,750,000, and a total area estimated at 842,700 square miles, contains, in a portion of its territory, the greatest extent of elevated plateau in the whole continent of South America, and some of the loftiest mountains of the New World. Here may be distinguished five different mountain systems:—The Coast Range, running from south to north, with few interruptions, along the western seaboard, but only a short portion of which lies within the limits of the narrow strip of the coast belonging to Bolivia; the Andes proper, here varied with many lofty crests—conical, dome-like, and bell-shaped—and pointed peaks, all more or less clothed with everlasting snow; the Central System, or the Cordillera Real—that is, the Royal Cordillera—generally described as the Eastern Range, which, though insignificant in height and extent when compared with the Andes proper, still attains a considerable mean elevation; the intermediate ranges and isolated groups; and lastly, the most easterly or Inner System of the Cordilleras.

Between these ranges the elevated uplands are situated, amongst which the most important is that of Oruro, called also the *Altiplanicie Central de Bolivia*, between the Andes and Royal Cordillera. The northern table-land is remarkable for two large lakes, those of Titicaca and Aullagas, besides the Laguna de Coiposa.

2. *Lake Titicaca.*

Lake Titicaca, at 12,196 feet above the sea-level, runs from the S.S.E. to the N.N.W. for a distance of 100 miles, with a mean breadth of 35 miles, and a depth of 120 fathoms. It is divided by a narrow strait into two parts, the northern forming the lake properly so called, the latter the Laguna de Unimarca. To the west of this channel both sheets of water penetrate the land so as to form an isthmus, which connects the mainland with the peninsula of Copacavana. The lake, which is studded with islands, has a southern outflow in the Rio Desaguadero, flowing for 160 miles through the northern table-land, into the salt lake and swamps Aullagas or Paria, scarcely one-third the size of Titicaca. This lake has only one perceptible outlet, and that very insignificant. What becomes of its superfluous water is still a matter of uncertainty. Titicaca itself is a fresh-water lake, and the vegetation on its borders is stunted and scanty, owing to the severity of the climate at the great elevation. In the waters grow acres of tall rushes, which the constant east winds blow when dead to the western side, where they mix with the living beds and form a dense tangled mass.

3. *A Salt Pampa.*

The southern plateau is distinguished by another natural feature, the Laguna de Salinas, at one time of the year forming a salt lake, at another a salt plain, hence called also *la Pampa de Salinas.*

It consists of a thick crust of a pure crystallised and dazzling white common salt, lying on an underground lake, but of which nothing can be seen except where a sort of salt mine is being worked by the Indians. The

Salt Pampa forms almost a perfect level, and in the dry season may be crossed, though always at some risk of sticking in the swampy ground. But in the rainy season it is quite impassable, the ground being then not only much softer, but also not unfrequently as much as three feet under water.

4. *The Great Central Plateau.*

Both sections of the table-land differ from each other in the greater or less abundance of water, the number of settlements, and the configuration of the land. The northern has a copious supply of fresh water, and is consequently the most fertile and thickly peopled; the southern, having but little water, is somewhat arid and but thinly inhabited, hence known by the name of *los Desiertos de Lipez.* The average elevation of the whole plateau is about 12,540 feet, varying from 13,700 in the highest to 12,000 feet in the lowest parts.

Besides this great central table-land, there are several smaller ones, all known as Pampas.

5. *The City of La Paz.*

The dreary aspect of the plateau between Lake Titicaca and the old Indian city of La Paz produces a depressing effect on the spirits. It is relieved only by the majestic snow-clad peak of Illimani, which remains visible till we reach the green depression in which lies La Paz itself. This city, which is rather the most important and populous town than the political capital of the country, is said to have at present a population of 70,000, mostly Aymara Indians. Its narrow streets are paved with sharp flints, but are provided with stone flagged footpaths for the convenience of pedestrians. The houses, with their tiled roofs present

a homely aspect, and the great square is adorned with a fountain. The Alameda, or public promenade, is planted with some scrubby little fruit-trees, imparting no grateful shade; but the place is sufficiently glorified by the sight of the mighty Illimani, 20,110 feet high, on whose eastern slopes all the noble plants of the tropics—sugar-cane, coffee, oranges, pine-apples, and the delicious "avocado pears," are cultivated and brought to the market of La Paz.

6. *Sucre and other Towns.*

Most of the other Bolivian towns have a milder climate than La Paz. The principal are, Sucre, or Chuquisaca, with 20,000 inhabitants, the present political capital of the republic, which is situated at an elevation of 10,500 feet, on high ground forming the water-parting between the Madeira and Paraguay river systems; Oruro (13,000 feet) and Potosi, at the same elevation, the latter with a present population of 22,000, and once so famous for its productive silver mines. Here the air is so rarefied that the European cannot walk twenty steps without stopping to take breath.

7. *The Yungas District.*

A very different aspect is presented by the lower-lying district east of the inner Bolivian Cordillera. From the northern edge of the plateau along which the traveller from the interior pursues his monotonous way on mule-back, a high wall of trees in the plain beyond continually bounds his view in that direction, and marks the southern limit of the great Amazonian forest. This region is known by the name of Yungas, a richly wooded region, watered by numerous tributaries of the Madeira river system, and surpassing most South American lands in fertility and

natural resources. On the completion of the projected railway round the rapids of the Madeira, a brisk trade will be likely here to spring up, as the country would then have easy access to the navigable Amazons, and by means of that great water-way to the Atlantic. Near these eastern plains lies the important city of Cochabamba, with from 36,000 to 40,000 inhabitants, and enjoying a beautiful climate, notwithstanding its elevation of 8000 feet above the sea-level. The townspeople are chiefly half-breeds of the Quichua race, industrious and thriving, though, as regards honesty and sobriety, leaving room for improvement. Its market supplies the miners of Oruro and Potosi with wheat, maize, barley, flour, and other necessaries. Quantities of goods are also thence conveyed to the other parts of the Yungas, and Cochabamba is, moreover, the emporium of the trade in Cinchona bark, which comes chiefly from the territory of the Yuracaré Indians, and is forwarded from this place onwards.

Amongst the numerous useful vegetable products of the Yungas district may be mentioned the copal tree, with its easily extracted resin by which the inhabitants of the woodlands light up their huts. Coffee also, of excellent quality, though as yet in small quantities, here flourishes side by side with rice, pine-apples, sugar-cane, and that exclusively tropical American plant the *Coca* (*Erythroxylon coca*), the leaves of which, reduced to powder, are chewed by the Indians both of Peru and Bolivia, and act as a gentle narcotic and stimulant on long journeys, or when exposed to hunger or unwholesome food. The more open savannahs farther south and east yield abundance of the richest pasture, and are dotted with cattle farms.

Notwithstanding the great heat and moisture, and the rank vegetation of the forests, the Yungas plains are exempt from intermittent fevers, or other epidemics.

8. *Agriculture—Industries—Mining—Backward state of Trade.*

Both agriculture and cattle-breeding are still in a very backward state in Bolivia, while trade and commerce may be said to be in their infancy. The chief industry is at present cotton-spinning. Formerly the principal wealth of the land lay in its mines, though even these are very little developed, the mineral districts lying at a considerable distance from the cultivated provinces, and almost the sole means of transport being the beasts of burden. The short strip of the Pacific coast owned by Bolivia possesses only one indifferent seaport, Cobija, north of the Atacama desert.

The leading articles of export are gold, silver, copper, tin, Peruvian bark, vicuña and sheep's wool, chinchilla fur, guano, sarsaparilla, tobacco, and spices.

9. *Inhabitants—Various Classes of Indians.*

The population of Bolivia consists of several races, half-caste Spaniards, and natives of various tribes. A third of the inhabitants reside in the cities and townships, the rest in the smaller hamlets and the *Campaña*, or country. There are also a few descendants of the Africans formerly introduced as slaves, and a good many Guarani Indians, who have come hither from the eastern districts of Paraguay, and increased considerably in numbers.

All the Indians are divided into three classes—the civilised, the semi-civilised, and the wild tribes. To the first belong the Quichua and Aymara, or Inca, Indians; to the second the Chiquitos and the Moxos; while the third occupy the southern districts of the Pilcomayo, Vermejo, and Paraguay rivers.

The Indians, at least such as do not live in the towns

A MOXOS INDIAN.

or farm large estates, work only three months in the year.

They are all either agriculturists or *arrieros*—that is, engaged in forwarding goods by means of numerous herds of llamas—or else occupied with the breeding of llamas, sheep, and goats on a very large scale. Their prevailing tastes lie in gambling and drinking, and the scrupulous observance of the feast days prescribed by the calendar of the Romish Church. Their only obligation to the State consists in the payment of tribute, which exempts them from military service. As soon as they have toiled hard enough to meet these engagements, they "strike work," spending the rest of the time in occupations that are either very little, or not at all, profitable to themselves or society. It is noteworthy that in the punas the rate of mortality is much higher amongst the Indians than it is amongst the whites and the Creoles. This is attributed to a species of fever which, with extremely rare exceptions, attacks the Indians alone, making great havoc amongst them.

10. *The Quichua Language—Manners and Social Vices—Revolutionary Spirit.*

Like the natives of most mountainous and inaccessible regions, which are, as a rule, less exposed to the innovating tendencies of civilisation, and consequently are more tenacious of the ancestral habits and customs, the lower classes in Bolivia, and in the smaller townships even many well-to-do families, prefer the Quichua or old Inca language to the Spanish, both in business and social intercourse. On the other hand, in the crowded streets of the capital and La Paz, ladies may be seen flaunting the latest French fashions, only in this respect, as usual, carrying them to extremes. In their own houses, however, they indulge in an extreme *négligé*, scarcely veiling their charms with the large shawls generally worn indoors

The Bolivian has two ruling passions—gambling and drink—his best moral feature consisting in the equanimity with which he bears his losses. Cases of suicide arising out of the ruin often entailed by these propensities are absolutely unknown.

Of the few strangers residing in Bolivia, French and Spaniards form the majority, Germans and others being rarely met with.

The political condition of the country calls for no special remarks. The framework of government is much the same as in Peru, and its history has been marked and stained by a similar career of purposeless revolutions and internecine warfare.

THE RIO DE LA PLATA &c.

CHAPTER XVII.

CHILÉ.

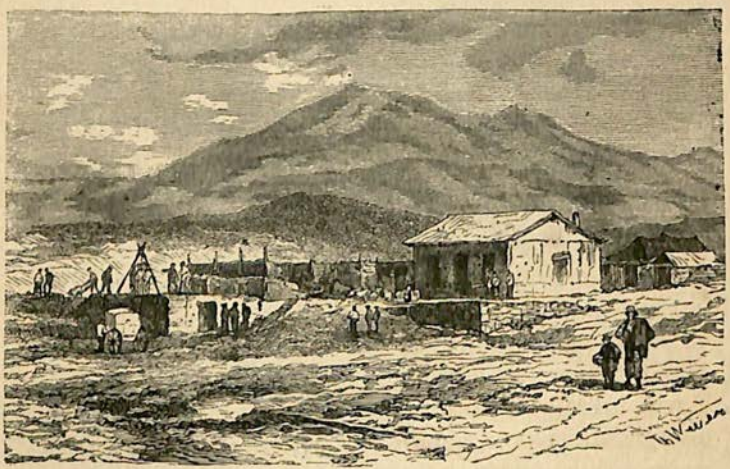
1. *Geological Features.*

THE narrow strip of land between the Andes and the Pacific seaboard, forming the home of the Chilians, presents some features of a special character. The intermediate range enclosing the long valley which constitutes the cultivated portion of Chilé is dominated by the snow-clad crests of the Cordilleras, whence is visible the distant Pacific Ocean, here never lashed to fury by blustering storms. Everywhere the bare sandstone crops up, intersected by masses of gneiss and granite, a luxuriant vegetation bursting forth only in places where the earth has accumulated in the strangely-formed valleys, here the result of volcanic action, subsequently moulded by glacial and aqueous agencies. But on the coast there is a dearth of water, so that a productive vegetation is found only in the elevated valley skirting the eastern slopes of the coast range.

2. *Mineral Wealth.*

The northern districts, as far south as Coquimbo, like the Peruvian and Bolivian coasts, being in the almost rainless zone of western South America, are arid and unproductive; but the country south of Coquimbo, possessing abundance of water, is well cultivated or wooded, and forms what its inhabitants call "the garden of the New World."

But even the barren northern portions are indemnified by their great mineral wealth, containing inexhaustible deposits of valuable metals. The whole province of Atacama is one vast mine. Wherever the trouble has been taken to look for them, treasures of mineral ores or alkalies, valuable as articles of commerce, have been found, amongst which may be enumerated salt, borax, copper, iron, gypsum, cobalt, lead, gold, silver, and saltpetre.



MINES OF CARACOLES.

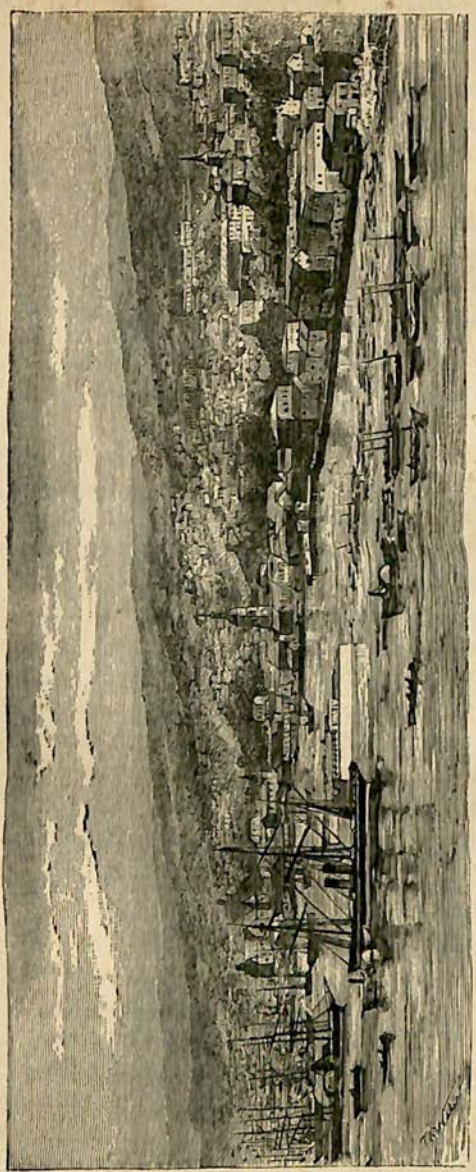
The amazing number of the mines may be imagined from the fact that in the first district of Caracoles alone upwards of 4000 silver mines have been discovered and surveyed, and have already been assessed. Caracoles (from *caracol*, a snail-shell) is so named from the mountains consisting mostly of a rich fossiliferous shelly limestone abounding in ammonites. In 1873 the bar silver exported from the ports of this place, and on which duty was levied, amounted to 375,000 kilogrammes, valued at £75,000, although, owing to the drought, the heavy transit charges,

and the high rate of wages, only a few mines were worked in that year. Bolivian political troubles were formerly an obstacle to the development of the resources of Caracoles, but there is a better chance of future prosperity, now that it is about to be annexed to the Chilian Republic as a consequence of the war. The mining country of northern Chilé extends southward by Illapel and Conchali towards Valparaiso; the country having a rugged, barren appearance, coated only with a thin mantle of green after the scanty rains which fall at wide intervals.

3. *Valparaiso and Neighbourhood—Juan Fernandez.*

The most important port on the Chilian coast is Valparaiso, that is the "Vale of Paradise," with 98,000 inhabitants, and situated in a district containing very little wood and water. Nevertheless Valparaiso produces a very pleasant effect on the visitor, although one feels inclined to fear lest the steep hill, houses and all, may topple at any moment into the sea; for the situation of Valparaiso is altogether peculiar. A high and broad mountain ridge forms a crescent round the wide bay, towards the shores of which it descends in steep escarpments. Fifteen or sixteen watercourses have furrowed the slopes of this coast ridge, forming the so-called *embrados*, or deep dells, both sides of which are dotted all over with houses of all shapes and sizes, imparting a very singular appearance to the city.

Along the shore skirting the bay runs the circular road, between the edge of the water and the overhanging cliffs, formed partly by filling in the low-lying beach, and partly by blasting away the projecting rocks. This roadway forms the great artery of Valparaiso, and is skirted by elegant warehouses, banks, government and other public buildings. According to the width of the various



VALPARAISO.

furrows in the hillside, the lower parts of the city gain more or less easy access to the outlets of the valleys, while a path winds up every declivity of the Cerro, the plateau of which is covered more or less densely with houses.

The foreign element in the population of Valparaiso is very considerable, and the numerous foreign residents evince a greater tendency to become naturalised than in other parts of South America. They have mainly contributed to the rapid commercial prosperity

of the place, though herein seconded by the enlightened spirit of the upper classes amongst the natives. The English, Americans, and Germans have been mostly instrumental in this, whilst the French and Italians have chiefly helped to diffuse the lighter elegancies of civilisation. The city offers most of the advantages possessed by places of larger extent and importance in other parts of the world, and has its places of public amusement, besides the charms of private society, on a considerable scale. Large mail steamers ply continually between the port and Europe, both by the northern route *viâ* Panamá, and the southern by the Strait of Magellan, thus keeping up quick and frequent intercourse with the great centres of civilisation.

At some considerable distance off the coast of Valparaiso lies the interesting group of islands called Mas à fuera, Mas à tierra, and Juan Fernandez, on the last of which the Scottish sailor, Alexander Selkirk, led a solitary life for some time, and became the model of Defoe's Robinson Crusoe; although the site of Crusoe's island agrees better with that of Tobago or some other of the West Indian group than with this solitary spot in the Southern Seas. The incident has recently been commemorated by a monument set up on the spot by the officers of the Challenger when she touched here in 1875 on her cruise round the world. In 1868 the island, which is often visited by whalers for water, was purchased by the Saxon engineer, Robert Wehrdan, who has founded a German colony there. Being well provided with all necessary appliances for tilling the land and raising stock, the young colony would seem to be already in a very prosperous way.

4. *Santiago de Chilé.*

Valparaiso is connected by rail with the political capital of the republic, the famous city of Santiago de

Chilé, situated in the interior of the country. The line leads by Leniache into the Quillota valley, thence winding through the gorges of the central range down to the valley of Santiago.

The city enjoys an exceptional reputation throughout America for its well-paved, broad, and clean streets. Some wealthy owners of mines and large landed proprietors have here erected many sumptuous buildings, rivalling in splendour the palaces of princes. But, apart from these not over-numerous exceptions, the architecture of the place has been wisely kept within the limits consistent with economy and comfort, cleanliness and adaptability to the climatic conditions. Hence most of the houses are built in the old Spanish style, and only one story high, as a precaution against the frequent, and at times terrific earthquakes by which the country is visited.

Tramways have been laid down in the main thoroughfares, by which passengers are conveyed right across the whole city from the east to the west end at very low rates, while hackney carriages are sufficiently numerous for more special traffic. Owing to the straggling character of the suburbs, Santiago covers a large extent of ground for its population of 148,300. The best view of the place is afforded by the Cerro Santa Lucia, a reddish porphyry crag rising abruptly from the very heart of the city. This hill has been converted into a favourite resort of the citizens, and is lit by gas. Besides this there is the Alameda, or public promenade, forming a triple avenue more than half a mile long, and about 100 yards wide. The central avenue is very fine, with its double row of trees, between which flows a little stream, flanked by seats and pavilions for the bands that enliven the scene with their music, especially on Sundays and holidays. The long range of the Cordillera, with its continuous line of snow-capped peaks, forms a limit to the view westward, and adds greatly to the grandeur of the prospect.

5. *Inhabitants—The Indians and Half-Castes.*

The peaceful, industrious, and enlightened population of Chilé consists mostly of half-caste whites and Indians, the pure blood Europeans being found in the best families only. The church here, as elsewhere throughout Spanish America, exercises a powerful influence over the people, but an influence in this case generally beneficial, owing chiefly to the higher personal character of the priests. There has been no lack of the usual struggles for power between the two great opposing parties, Liberals and Clericals, and the latter are not wholly exempt from the charge of desiring to dominate in secular matters.

The features and complexion of the lower classes are strongly marked by the Indian element, though less so in the capital than elsewhere. Yet these dark countenances, with their thick black hair, thicker and longer in the women than the men, are not deficient in a certain agreeable expression, although really handsome features are rarely met with in either sex. But they are not naturally industrious, and can be induced by necessity alone to devote themselves to hard work. The Chilian miner is doubtless an excellent worker, but he displays his skill chiefly where the mine is rich and affords plenty of opportunity for pilfering.

The life of the "huao," on horseback in the open country, best suits the half-breed descendants of the Spaniard and Indian, and, like the inhabitants of all the warmer climates, they love best the *dolce far niente*. Yet it is pleasant to see the enormous herds of cattle and horses grazing on the pasture lands along the river-beds, and attended by the huao, enveloped in his poncho, and amusing himself with the falcon on his wrist, while the real work of looking after the herds is done by a specimen of the fine breed of wolf-dogs of the country, crouching at his feet.

6. *The Whites—Social Manners.*

Very remarkable is the extraordinary way in which the pure white race thrives in Chilé; both men and women, but especially the latter, combining all the elements of physical beauty in their persons. The better classes, the *aristocracia de sangre azul*, as they call themselves in Santiago, are very careful of their outward appearance, and particular in their social demeanour, without doing the least violence to the liveliness of their southern temperament. The ladies combine grace and dignity with an inborn ease, which is perhaps all the more surprising as it is found in a place so far removed from other centres of taste and culture. But it may be explained by the circumstance that most of them have either visited or been educated in Europe.

The tone of society is very agreeable and friendly. Once introduced, one is made to feel perfectly at home, and may always rely on a hearty welcome. But what distinguishes the Chilian most favourably from his neighbours is an honourable love of his country; for the Chilian is a genuine patriot, and it is not perhaps surprising that strangers settled in the country become gradually inspired by the patriotic feelings of the people amongst whom their lot is cast. Thus it happens that the little nation growing up on the Pacific slopes of the Southern Cordilleras becomes daily strengthened by the accession of immigrants, who had originally no intention of settling permanently in the country. All strangers are loud in their praises of the courteous and friendly character of the Chilians, and it would be unfair not to recognise in the fullest manner the good repute they bear in this respect. It must be acknowledged that the higher classes are animated by the sincerest love of their homes, their

people, and their country, and that a nation so circumstanced is taking the very best course towards securing the noblest objects of political and social life, in every sense of the word.

7. *The Land Question—Population—Emigration.*

At the same time the dark side of the picture presented by the political atmosphere of Chilé cannot be overlooked. The conditions of land-tenure have given rise to much political strife. For there are here no small tenantry, no peasant class, nothing in fact but hired labourers of the large landed proprietors. The families of the oligarchy have secured to themselves the possession of the whole land, and the poor wretches employed by them are really worse off than slaves, or than the Russian serfs were before their emancipation. The abject poverty of the labouring classes in Chilé can scarcely be paralleled elsewhere in the whole world, it being here the result of over-population. It is a fact, attested by the official returns, that in consequence of this intolerable state of things no less than 30,000 labourers migrated in one year to Peru, where they have been chiefly engaged on the great railway lines already described.

According to the census taken on April 6, 1866, Chilé had a population of 2,084,943, without reckoning the inhabitants of Araucania, estimated at 70,000, and of Tierra del Fuego, making nearly 4000 more. But in the decade between 1866 and 1875 there was a slight falling off, the census of 1875 giving a total of 2,068,447. In proportion to its population no country in the world sent forth such a stream of emigrants as did Chilé before the present war with Peru. According to the carefully prepared returns of the "National Society of Agriculture," there is one emigrant in Germany for every 200 of the

population, 1 to 113 in England, 1 to 2000 in France, but in Chilé there was 1 to every 76!

The great tide of migration flows partly over the Cordilleras to the Argentine States, and partly, especially in more recent times, to the hilly districts of Peru, where agriculture yields better returns, and the day-labourer is better paid. Chilé has sought to attract its shâre of the stream of European migration, but has naturally received the answer that if the prospects of settlers are so bright in the republic, why cannot the native workmen remain there?

8. *Railway Enterprise—Finance—Public Instruction.*

At the same time there are many favourable circumstances, indicating a steady progress in the well-being of the country, by no means the least of which is the splendid network of railways now completed or in course of construction. The two most important railways open for traffic are the lines from Valparaiso to Santiago, 115 miles in length, and from Santiago to Curico, 116 miles long. Both these railways belong to the State. The line from S. Filipe to Santa Rosa de los Andes when finished will bring into direct communication the towns of Santa Rosa, Santiago, and Valparaiso, and confer great benefit on the fertile province of Aconcagua. The line from Talcahuano to Chillan, the recently projected line from Santiago to Valparaiso, *viâ* Melipilla, and the grand railways from Curico to Chillan, and from Malboa to the Araucanian frontier, will complete the system. At the end of 1875, the total length of lines opened for traffic was 820 miles, 209 miles more being in course of construction, some of which have since been completed. The telegraph system is also well developed in the country; there being at the end of 1875, 2650 miles of line, with 55 telegraph offices.

Meantime the finances of the republic are in a very flourishing state. The total trade of the country (including exports and imports) averaged in the years 1871-5 fourteen millions sterling. The foreign commerce is carried on mainly with Great Britain, while France stands next on the list, followed by Germany, the United States, and Peru. The public revenue amounted in 1874 to £3,132,344, which was in advance of previous years. Unlike the great majority of the Spanish Republics, Chilé honourably fulfils its obligations to its foreign creditors, and its credit stands high in the money markets of the world. Public instruction is likewise steadily progressing, schools are on the increase, and agricultural schools have lately been opened. Santiago possesses a university, with museum and school of medicine in active operation; and the scientific journal published under its auspices, the *Anales del Universidad de Chilé*, compares well in regard to the value of its papers with similar publications in the most civilised countries of Europe. Altogether in no other of the Spanish American States is so much attention paid to the educational interests of the people. The leading politicians have proclaimed the development of instruction as the basis of all true progress. Every province has its gymnasium, and a normal school for the training of male and female teachers was opened in Chilé before any similar institution yet existed in the United States. There are 938 elementary schools, and a law has been passed by which the number is to be raised to 1670. They are under the direction of superintendents, the general superintendent being required to report officially on them once a month, these reports being published in the *Monitor de las Escuelas*, a periodical devoted to educational interests. The whole outlay for the public schools amounts to £224,000, an enormous sum for such a young country.

9. *Politics—Public Spirit of the Aristocracy.*

Hitherto Chilé has been exempt from the military dictatorships and civil warfare by which the other Spanish American States have been discredited and impoverished. The aristocracy of descent and territorial possessions—for of course no titles are borne—forms a somewhat exclusive social circle, living harmoniously together, and animated by the best feelings towards the country. They conduct the affairs of State in the most upright spirit, and often at the sacrifice of their own private interests, a circumstance which contributes not a little to keep the lower classes in willing obedience to the laws. Justice is administered impartially, and with sufficient expedition, while social order is irreproachable.

Chilé has altogether earned the reputation of a well-governed and orderly state, and it must be the sincere hope of all admirers of rational liberty and social well-being, that it may be spared the many evils by which all the other Spanish American States have been so sorely tried.

ATLANTIC OCEAN
B
R
A
Z
I
L

CHAPTER XVIII.

THE ARGENTINE CONFEDERATION.

1. *Vast Extent—Physical Aspect.*

NEXT to the Empire of Brazil the Argentine Republic, or La Plata, claims rule over the largest extent of territory in South America. Its limits were until recently very ill defined, especially towards the south, where a large part of Patagonia was long in dispute between Chilé and La Plata. But the frontier was definitely arranged in 1881, in such manner that the whole of Patagonia east of the Andes remains with the Argentine Republic, whilst the shores of the Straits of Magellan belong to Chilé, Tierra del Fuego being shared between the two by a dividing line north and south. The whole territory is now estimated to contain 1,215,000 square miles.

The monotonous configuration of the Argentine territory has already been amply dwelt upon, and it will suffice here to add that the detached ranges of Cordova and San Luis, in the western interior, nowhere more than 7500 feet high, and everywhere accessible and inhabited, and the loftier slopes of the Andes, abound in ores of all sorts.

2. *Minerals—Soil—Fossils.*

Gold, silver, nickel, copper, tin, lead, and iron, besides

several kinds of marble, jasper, precious stones, and bitumen, are found in mountainous districts in the provinces of Cordova, San Luis, Mendoza, San Juan, Rioja, and Catamarca. In the province of Jujuy, and on the Rio Vermejo, rich petroleum wells have also been discovered, and coal exists in many localities, though the extent and probable productiveness of the beds have not yet been ascertained. Hitherto, however, the yield of these numerous mineral deposits has borne no proportion to their real contents, chiefly owing to the want of highways and means of transport. Still, silver and copper are exported to a considerable amount.

The level portions of the land are almost exclusively of Tertiary formation, the river and coast regions consisting mainly of alluvial soil of extraordinary fertility. The rich mould of these districts has a depth of from one to seven feet, and it lies on a sandy clay that becomes harder and harder the lower it gets. This Tertiary pampas clay is the formation in which have been discovered those celebrated fossil animals, such as the megatherium, one of the giants of the primeval world, allied to the sloth, the giant armadillo, and many other extinct forms. Good wholesome water is met with almost everywhere at depths of from 10 to 70 feet. Stone, however, is very rare, though the sand of the rivers, especially the Uruguay, is often mingled with a sort of flinty pebbles, consisting of carnelians, agates, onyxes, and jasper.

3. *Climate—The Pamperos—Rainfall—Vegetation.*

The climate of La Plata is exceptionally fine, pleasant, and salubrious, being similar to that of the Cape and New Zealand, lying between nearly the same parallels of latitude. The maximum temperature does not exceed 97° Fahr., especially south of 30° S. latitude, and this is a

temperature which does not materially affect the European, even when engaged in field labour. The winters are short and mild, the mornings being frosty and the evenings cool, but the cold during the day very moderate; consequently agricultural operations can be continued without interruption throughout the year.

The seasons, in a country situated like this in the Southern hemisphere, are, of course, the reverse of those of Europe, the shortest day being June 21st and the longest December 21st; but the difference in the length of day is perceptibly less than in northern Europe, owing to the much lower latitude. It rains far less frequently than in western Europe, and the sky is nearly always clear and unclouded. Rain, as a rule, is produced only by the stormy, blustering, *pampero* winds, blowing from the south-west, and dispersing all noxious vapours and exhalations. Other winds also prevail, and a perfect calm is a rare phenomenon.

The rains accompanying the pamperos are very beneficial, being usually sufficient for agricultural purposes, especially when due attention is paid to them in conducting field operations. Under such favourable conditions of soil and climate vegetation is naturally very luxuriant, though in the south consisting mainly of grasses and brush-wood. The woodlands begin about the latitude of Santa Fé, becoming denser and more extensive as we proceed northwards, until the vegetable growth gradually assumes a tropical character. The river banks and the large islands of the Paraná are overgrown with an exuberant wealth of trees, creeping plants, and gorgeous flowers; lower down the islands are chiefly wooded with a species of willow. In the northern districts we meet with valuable nut-producing plants and fruit-trees. All European fruits—foremost amongst which is the vine—have been successfully introduced; as has been also the case with the European

domestic animals, some of which have here again run wild. Countless herds of cattle and horses, and flocks of sheep, roam over these boundless plains, where they multiply more rapidly than in Europe.

4. *Inhabitants—Whites—Indians.*

As regards the inhabitants it may be remarked that the various races have been less intermingled here than in any other South American country. The European invaders found the vast Pampas only very thinly peopled by nomad Indian tribes, so that there was, on the one hand, no such disproportion in number between the European and native elements here as elsewhere; while, on the other, the blending of the two was largely prevented by the nomad life of the aborigines themselves, who, by shifting their quarters, could always readily avoid any contact with the whites. Hence, nowhere else are so many families to be met with who are the direct descendants of the first European conquerors. Negroes also have been imported in very limited numbers, so that no great blending could take place between the so-called Caucasian and the African races.

Being thus less tainted by alliances with inferior races, the inhabitants of La Plata bear a far more European character than most other South American peoples. The white element has here been always numerically in the ascendant, and is consequently much more ready to receive fresh additions from the home countries. Here the European immigrants, if themselves otherwise of a good stock, have nothing to fear from debasing alliances with the natives, nor are they driven to a policy of native extirpation in order to preserve themselves.

5. *Recent Immigration from Europe.*

These favourable circumstances have attracted a considerable stream of European immigration in recent times, the numbers who arrived in 1872 being calculated at 37,000. The annual arrivals rose to 79,700 in 1873, and were 68,277 in 1874. The predominating element in this great migration is the Italian, those irreproachable models of thrift and economy. They are already reckoned on the Plata by hundreds of thousands, and nearly all of them naturalise themselves in their new home. The most numerous, next to them, are the Basques, of whom there are 50,000, settled mainly in the province of Buenos Ayres; but there is also a great French and English population, besides Germans and Swiss, the latter especially in a very prosperous way. The English have generally embarked in sheep-farming, as in Australia, purchasing large tracts of the rich pasture lands of the Pampas. The Argentine Government devotes great attention to the colonisation question, actively promoting the peopling of the country by this means. Emigration has declined considerably during the last few years, partly owing to the great check given to the prosperity of the country by overtrading. Such difficulties have been encountered in all rapidly rising colonies, and are known to be only temporary.

6. *Landed Proprietors and the Labouring Classes—Provincial Towns.*

Speaking generally, we find the aristocratic element in possession of the greater part of the land, while the lower classes, partly half-castes, are employed by them in the capacity of *capatazes* and *peones*—that is, overseers and labourers—tending their countless herds, and leading

a real nomad life, very similar to that of the inhabitants of the Asiatic steppes.

In this way the main features of the interior of the country have been preserved to the present day. The Italian immigrants singularly enough betake themselves largely to river-life, and are in great numbers employed in navigating and trading from port to port. The wealthy landed proprietors generally spend the greater part of the year in the capitals of their respective provinces, visiting their *estancias* only in the summer. Hence their existence is passed in rather a narrow groove, between town and steppe life, the one civilised, the other half barbarous. In the towns we meet with every comfort, besides great luxury, and of course all the latest Parisian fashions. Nor is the theatre wanting, while brilliant hotels, cafés, and billiard-rooms, are met at every corner.

But a few miles outside the towns we find ourselves surrounded by a rude and solitary nature, so remote from all traces of civilised life that we might fancy ourselves suddenly transported to the depths of a dreary wilderness. Throughout the whole country there are scattered sixteen such provincial towns, mostly with but a few thousand inhabitants each, the most noteworthy being Rosario, Cordova, Tucuman, Santa Fé, Corrientes, and Mendoza. But none of them approach Buenos Ayres, the capital of the Confederation, in importance.

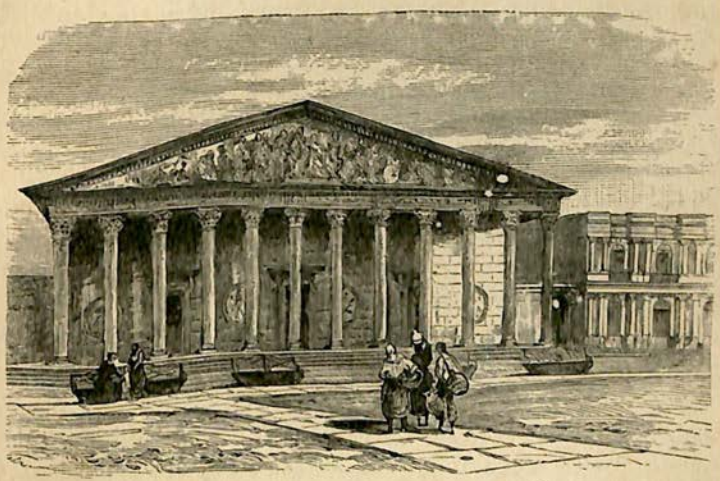
7. *Buenos Ayres.*

Buenos Ayres is laid out as a regular square, the streets intersecting each other at right angles, as is usually the case with all towns in the New World. The central portion especially is well built, with beautiful churches, including an English one, and fine warehouses in every direction. But the streets being somewhat hilly,

BUENOS AYRES.

To face page 390.

and the footpaths kept as far as possible on the level, these are in some places rather too elevated above the roadway. Hence the pedestrian has to descend at every street corner eight or ten breakneck steps, so slippery with dirt that, in the absence of an "alpenstock," he has to slide rather than attempt to walk down them. The feat successfully accomplished, he has still many pitfalls to guard against, such as deep ruts and holes, reckless



STREET IN BUENOS AYRES.

riders, and other snares of the kind. The footpaths, however, afford a free view of the interior of the houses, where the señoras and señoritas, generally in negligé, and reclining in their rocking-chairs, may be seen smoking cigarettes at their ease in the middle of the room. Some elegant lacework may possibly be lying near at hand, but reading or writing, to say nothing of plain needlework, or in fact work of any sort, are things quite beneath the consideration of the Argentine ladies. It is

otherwise with the daughters of Europeans, who receive the same education as in the home country.

The fashions are rapidly imitated, and any Parisian or London novelty will be found universally adopted by "the young men about town" in Buenos Ayres, within thirty days of its introduction in Europe. An indescribable babel of tongues prevails in the cafés, which are mostly in the hands of the Italians. But as a rule the genuine native of La Plata rather looks down on foreigners, calling them *gringos*, though admitting their superiority in business matters.

8. *The Gauchos.*

The town population dress like Europeans, obey the laws, attend to the education of their children, and in most other respects think and act like civilised beings everywhere. Very different is the case with the inhabitants of the country districts and boundless grassy plains, especially with the *Gauchos*, that is, the half-caste descendants of Indian women and the first Spanish adventurers and freebooters. This class, however, is becoming less numerous, gradually disappearing before the progress of civilisation, if such an expression can be at all applied to the state of things in these regions. But the word *Gaucho* itself, which formerly bore a somewhat honourable meaning, is now often applied to a class of men who are generally too lazy to work, and in many cases take to horse, sheep, and cattle stealing, making short work of the owners themselves, should they show themselves too zealous or troublesome in the defence of their property.

These rural gentry have altogether a different dress, different manners, and different ways of thinking, from the urban population. Indeed, they will have nothing to do with the townsfolk, regarding them as strangers, and

GAUCHO BREAKING IN A HORSE.

To face page 392.

looking with contempt on their luxurious habits and steady social ways. The inhabitant of the Pampas is above all a horseman, a breeder of cattle, a half-savage shepherd,

A GAUCHO.

but not a rover in the strict sense of the term. For the land on which he grazes his herds is his undisputed property; here he leads a solitary life, miles removed from his fellows, and associating with none except the *estancieros* of neighbouring runs. There are no organised societies,

no community of feeling, no schools, but a great deal of superstition.

These people are passionate gamesters, like Spanish Americans generally, especially of the lower class. From their earliest youth they are taught to throw the lasso (practising at first on calves and goats), to tether colts, and to ride. The Gaucho, whose blood is greatly mixed, has retained little of the Spanish element, beyond the gross superstitions and the speech of that race. Living in the midst of a wild and open nature, he has developed an overbearing, unbending character. As already remarked, he despises the men devoted to the quiet pursuits of a town life, and who cannot so much as grapple with a wild bull or an unbroken horse.

As a soldier he is enduring, brave, and ruthless. For he has been accustomed to blood from his tenderest years, and he makes no more account of slaying a man than of poll-axing an ox. He is strongly built, but has no need to work, as his herds provide him with all he needs. His diet for weeks together is often nothing but beef, without even the admixture of vegetable food. He is altogether an original type of humanity, unaffected by the ideas and practices of civilised beings.

But besides the genuine Gaucho there are other wandering individuals who may justly bear the same name. These are continually on the move, and it often happens that one is met with in the neighbourhood of Buenos Ayres, who two or three weeks before was seen some 700 to 800 miles away in northernmost provinces of the state. He always mounts the same horse, is never without a cigarette in his mouth, and, like a genuine Castilian, will salute you most courteously with his broad-brimmed sombrero. He is always happy and contented, interferes with nobody, and also expects that nobody will interfere with him. Even the authorities fleece the Gaucho as

little as may be, and never meddle with his affairs, if they can possibly avoid doing so.

9. *Material Progress—Trade—Education—Agriculture—Cattle-Breeding.*

Notwithstanding the above-mentioned circumstances and the many political and commercial troubles to which it has been exposed, the Argentine Republic is on the whole making rapid strides in advance, in social and political life. It already possesses a fairly developed railway system, which it is energetically extending, and is just now projecting a line across the Andes, intended to bring Buenos Ayres within 48 hours of Valparaiso. No less than 1409 miles of railway were open for traffic in the middle of 1878, and 1100 miles were in course of construction, besides which a large extent of additional line has been sanctioned by the Government.

The trade with Europe is promoted by no less than nine ocean steamship companies. In the five years from 1871 to 1875 the value of the imports rose from $9\frac{1}{2}$ to 11 millions sterling, and that of the exports from 7 to 9 millions. In Buenos Ayres are published twenty-five journals and periodicals, amongst which are eight in languages other than Spanish. Some twenty English joint-stock companies have introduced a large amount of capital, which has been applied to the promotion of numerous industrial undertakings in the country.

Public instruction is well cared for, every town in the interior having opened morning and evening schools, gymnasiums, and other institutions, where free instruction is imparted to every one. The cultivation of the land has also been greatly improved, and is now carried on by means of all the best English and North American agricultural implements. In Chaco there are some dozen

flourishing colonies that have brought large tracts of land under tillage. Most industries, however, are yet in a backward state, the principal articles of export being limited to wool, hides, and tallow—the raw products of the widespread cattle-breeding establishments. At the *saladeros*, or slaughtering places, the oxen are despatched with mechanical precision and rapidity, but also with much brutality. The towns are now mostly provided with tramways, fire and life insurance offices, waterworks, highways, and telegraphic systems, bringing them into connection with the more important districts in the country. The desire of improvement is also testified by the recent establishment of cattle-shows and the development of the breed of horses, cattle, and sheep, to say nothing of horse-races, which have become a national institution. There is a society in Buenos Ayres, as we learn from Mr. Hadfield, called the "Sociedad Rural Argentina," which has published its tenth annual report, consisting of a large folio volume, dedicated to the defence of the rural interests of the country and to the propagation of a knowledge of agriculture in all its branches. Nor are the interests of pure science neglected, as the handsome volumes of the publication entitled *Anales del Museo de Buenos Ayres* bear ample witness to.

Thus has the Argentine Republic grown out of its state of pupilage, and has now become a thriving nation with a population of nearly 1,900,000 souls, looking forward to a bright future, with less wavering hopes than many of its sister republics.

CHAPTER XIX.

PARAGUAY.

1. *Limits—Physical Aspect.*

PARAGUAY, the Mesopotamia of South America, has been richly endowed by nature, few countries being able to compare with it in this respect. On the east and south the Paraná forms the frontier line between it, Brazil, and the Corrientes missions, while on the west it is separated in its entire length from el Gran Chaco by the Paraguay, one of the finest streams in the world. On the north the Rio Apa divides it from the Brazilian province of Matto Grosso.

The country, thus defined, lies just outside the tropics, between 22° and 25° S. latitude. The configuration of the land is very varied. Its northern and eastern districts form a table-land, intersected by hilly ranges, which dwindle down to small ridges, connecting them with the highland regions and level uplands, all unusually fertile. The chief part of the land may, in fact, be looked upon as a continuation of the great interior plateau of Brazil; but no part of it much exceeds 2200 feet above the level of the sea. In the lower districts, nearer the great river and its numerous tributaries, there extend strips of alluvial plain and vast marshy lowlands, for a portion of the year under water, and admirably adapted for the cultivation of rice. The country is of about the same extent as England, and from its geographical position enjoys all the advantages of a sub-tropical climate.

2. *Natural Advantages.*

Under such physical conditions and climate, it is not surprising that the products, both of the tropical and temperate zone, here flourish vigorously. Under a firmer political administration, and with a more numerous and industrious population, Paraguay might easily become one of the richest lands in the world. For, apart from the swampy districts, the climate itself is healthy, although warm. Nor is the position of the country unfavourable to its development. By means of its numerous navigable streams it has easy communication on the one hand with Central Brazil and Bolivia, to the north, and on the other with Monte Video and Buenos Ayres, to the south, thus having free waterway to the Atlantic Ocean.

3. *Population—Chequered History—Disastrous Wars.*

Yet the land is but thinly peopled and sparingly cultivated. The great and wearily-protracted war carried on some years ago by it with Brazil, La Plata, and Uruguay, cost Paraguay nearly one half of its domain, and reduced its population from 1,340,000 to about 220,000, of whom only 29,000 were men, the remainder being women and children. Hence, for want of labour, its resources remain at present almost untouched, but very small quantities of its products being exported. Indigo grows wild, but the most important product at present of the country is the *maté*, or Paraguay tea, the dried leaves of a species of *Ilex*, which the Indians gather in the forests. Besides this, the land yields hard-grained woods, and a little tobacco of very good quality is cultivated. The whole trade of the country is small—exports and imports together not exceeding half a million sterling per annum.

Paraguay has had a strange history, that may here be

briefly summed up. The original inhabitants were almost exclusively Guarani Indians, a docile people trained up by the Jesuits to a certain degree of civilisation, for in no part of the world were the missionary establishments of this powerful order so successful and flourishing as here. When the country proclaimed its independence of Spain, the reins of government were seized by Dr. Francia, a well-meaning despot, who, during his long administration, carried into effect his ideas of advancing the material interests of the State by shutting it off from all communication with the outer world. Under his government Paraguay was for a long period as effectually closed as was Japan before it.

His successor, Lopez I., pursued substantially the same exclusive policy, though without carrying it quite so far. The population increased considerably, and the country enjoyed a certain amount of prosperity. But his son, Solano Lopez, began to build steamers, arsenals, railways, aimed at enlarging the frontiers of the State, and meddled with the trade of the lower La Plata, thereby involving the country in the disastrous war, already mentioned, with its neighbours—Brazil, Uruguay, and La Plata.

4. *The Guarani Indians.*

Although Spanish is the official language, it is spoken and understood by but very few of the people. The universal medium of communication is the Indian tongue—the Guarani—which is used for ordinary purposes even by the few whites settled in the country. Even at the time of the war of independence there were at the utmost not more than 60,000 people of European descent in Paraguay, including the half-castes. All the rest were, and are to this day, pure-blood Guaranis. The Guarani language is rich in vowels, and euphonious in speech, but its vocabu-

lary is meagre. It has great resemblance to the Tupi spoken by kindred tribes along the Amazons; the common

GUARANI WOMEN.

language, indeed, under the name of the Tupi-Guarani, was reduced to system by the Jesuits, and printed gram-

mars and dictionaries are still on sale in booksellers' shops in Brazil.

The Guarani, trained by the Jesuits to the most implicit obedience, is sluggish, peaceful, submissive, lives simply, knowing no higher wants, and with his family leading a patriarchal life. He is not deficient in mechanical ability; being a good smith and worker in gold, skilfully imitating the patterns laid before him. But he lacks the inventive faculty. As a soldier, he showed in the wars under Lopez a stubborn courage and a stoical fearlessness of death.

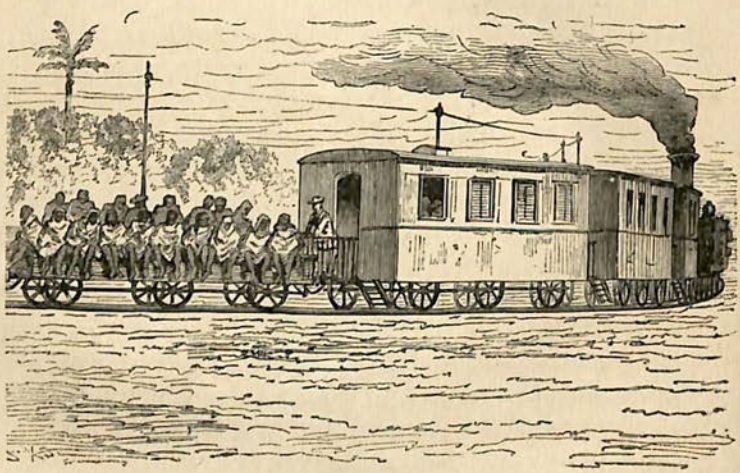
The women have been generally more favourably spoken of than the stronger sex. Industrious and cheerful, they are up betimes to fetch water, always walking Indian file down to the river with their great pitchers balanced on their heads. When empty, these are deftly poised in picturesque and graceful attitudes, the bearer walking boldly and confidently with a firm step. Their single garment is of white material, contrasting with which their dark complexion appears to great advantage. The smock, or rather gown, reaches to the calves, a cord serving the purpose of a girdle, and the upper part of the bosom remaining uncovered. Pockets or baskets they do not encumber themselves with, carrying all they need in this garment—cigars, money, and all the little trifles usually consigned to the pocket.

Many Guarani women are very finely developed, and all have beautiful teeth; yet, according to our ideas, the type can scarcely be called handsome, the cheek-bones being too prominent and the chin too square. Their large black eyes are shaded by heavy brows, and their raven hair is also very thick. All the women smoke tobacco, and are mostly seen with a huge cigar in their mouths. Even the little children smoke, and when infants are restless, mothers have been seen to quiet them by cramming

their mouth with the cigar they have been smoking. Their devotion to their partners in life, whether joined in lawful wedlock or not, is much praised; they are industrious and intelligent, never contradict, and are remarkably clean and tidy in all things.

5. *Asuncion—Paraguari—Railway Travelling.*

The only place deserving the name of a town is the capital, Asuncion, with a present population of 18,000 souls. Life in Asuncion is naturally very monotonous.



RAILWAY TRAVELLING.

The men belonging to the so-called upper classes pass their time in drinking maté, smoking cigars, eating, and sleeping, and it is wonderful how human beings can bring themselves to endure such a vegetating existence.

Asuncion is connected by a short railway of 45 miles with Paraguari. The carriages are of North American build, comfortable and elegant, but the rails have been very carelessly laid. It is noteworthy that to every train

are attached two carriages, or rather trucks, on which the poor, with all their little effects, are conveyed free of charge. When the trains run, which is not a regular occurrence, these free conveyances are always crowded, and a large number of naked brown legs may constantly be seen dangling in the air as the train jolts along.

Paraguari may have a population of some 3000, but there, as elsewhere in this unfortunate country the state of things, governmental and social, is one of complete demoralisation.

CHAPTER XX.

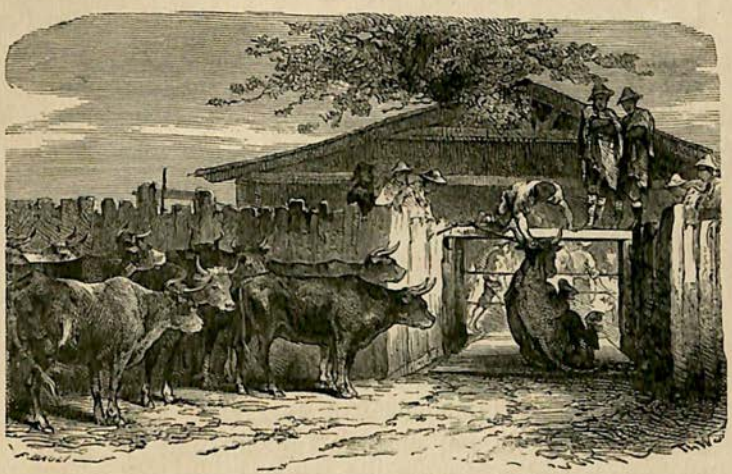
URUGUAY.

1. *Physical Aspect—Produce—Meat Extract.*

URUGUAY, or, as it was formerly called, Banda Oriental ("Eastern Side"), offers still less subject for comment than Paraguay. The domain of this republic forms a sort of connecting link, between the country of southern Brazil and that of the Argentine States. In the north we have a region of hills, the spurs or offshoots of the South Brazilian ranges, but rising to an elevation of little more than 2000 feet; on the west and south a gently undulating treeless plain, in fact a true pampa, extends all the way to the coast. In this pampa we again meet with the Gaucho type of inhabitants, and cattle-breeding is the most important and almost the exclusive occupation of the people, just as in the Pampas of the Argentine States. At the Vienna Exhibition of 1873 the industry of Uruguay was mainly represented by preserved meat under three different forms—as an extract, as dried flesh in cases, and simply as corned beef.

Fray Bentos, on the Uruguay, would seem to be the centre of the extract-of-meat trade, and as many as 500 head of cattle are now daily slaughtered in that place. Hides, tallow, bone-ash, wool, and sheep-skins, besides this extract of meat, are the principal articles of export trade in the republic. The foreign trade is of considerable

importance, imports and exports together amounting to about six millions of pounds sterling per annum.



SLAUGHTER-HOUSE IN FRAY BENTOS.

2. *Inhabitants—Occupations—Sheep-Farming.*

The people and their pursuits are here nearly the same as in La Plata. On the extensive pampa are found rich *estancias,* whose owners, the *estancieros,* possess countless herds of cattle. Besides cattle-breeding, that of sheep is also extensively carried on, for the sake of the wool, which is sent in a very rough state to Europe. Many estancieros also export thither prepared and dried hides, and are making strenuous efforts to improve the quality of the wool. But the shearing of the wretched creatures is performed after a truly barbarous fashion. For here the sheep itself is of scarcely any value at all, and in every part of the world animals are estimated and treated entirely according to their greater or less market value. But in spite of all the losses incurred by the recklessness of their owners, and

the great mortality prevailing amongst them, the flocks go on daily increasing in numbers throughout the republic.

Notwithstanding the vast numbers of cows attached to every estancia, scarcely a drop of milk is anywhere to be had. Corn also is very little cultivated. The people have no idea of ploughing the land, and the consequence is that their diet consists almost exclusively of flesh, hard biscuit, and Paraguay tea. Butter they are scarcely acquainted with, and dairy cows are to be seen only where the proprietor is a European, who knows how to appreciate the value and flavour of new milk and fresh butter.

3. *Monte Video and Vicinity.*

In one respect, however, Uruguay is decidedly in advance of the Indian Republic of Paraguay. It possesses a large, well-built, and pleasant capital, Monte Video, of which one-third of the residents are foreigners.

Situated on a hill of moderate height, and projecting to some distance into the sea, Monte Video presents a charming aspect, with its compact mass of white houses, and its lofty cathedral towering above all the surrounding objects. The steep streets almost invariably command a view of the sea, and are carefully paved, and provided with fine footpaths, though sudden downpours of rain will often form little pools and puddles, especially in the poorer quarters.

The houses are built in the usual South American fashion. The roofs are flat and provided with iron railings, so that one can here take an airing of an evening as the sun sinks into the sea, or as the friendly moon rises enveloped in a haze lit up with the many tints of the rainbow. On these roofs are also often raised lofty structures, with high balconies, seated on which one gets an extensive prospect seawards. The evening is usually fine and cool,

even after a hot summer's day. In the very atmosphere of those regions there is something calm, friendly, and inviting to soothing thoughts. We rarely meet, in this delicious climate, with people of discontented or morose temperament, such as are unaffected by the stillness of these beautiful evenings.

Many houses have little towers, or *Miradores*, as they are called, mostly open, and commanding a clear view of the sea and the city.

Monte Video is connected by a short railway with the neighbouring and charming little watering-place of Santa Lucia, nestling in the brushwood, and situated on the river of the same name.

4. *Constitution—Stormy Politics—Deficit—Population.*

Uruguay boasts of possessing one of the finest political constitutions in South America; it sounds therefore almost like irony to be obliged to add that this republic has been cursed with more frequent revolutions than any other in the New World. Hence it is not surprising that the budget for 1874 showed a deficit of no less than 30 per cent. Some little time back, however, it seems to have enjoyed an unusual interval of prosperity. In 1860 the population numbered 221,248, and it has now risen to 450,000.

The city of Monte Video has also rapidly increased in population;—from 3500 in 1818 to 105,296 in 1872, and 125,000 in 1876.

CHAPTER XXI.

BRAZIL.

1. *Points of Contrast and Resemblance to the United States.*

Of the States in the New World, the Empire of Brazil ranks, in respect of extent, solidity, and power, second only to the United States of North America. In South America it has no rival—in size, population, prosperity, order, and stability of the social relations, being surpassed by the great northern Republic alone, though in most respects offering as sharp a contrast to it, as does the southern on the whole to the northern Continent.

As the American Union has taken the lion's share of the land in the northern half, Brazil has in its turn appropriated by far the largest portion of the southern half of the New World. Both present widespread, uninterrupted masses of land, and both have the advantage of a length of coast-line on the Atlantic, while Brazil, unlike its northern compeer, is cut off altogether from the Pacific Ocean.

But a single glance at the map shows how entirely different is the geographical position of the two States. Apart from the recently acquired and isolated territory of Alaska, the Union nowhere penetrates either into the arctic or the tropical, but lies entirely within the temperate zone, though still subject to considerable contrasts of temperature—such for instance, as the hot and damp

climate of Florida and Louisiana on the one hand, and on the other, the cool regions of the upper Missouri and the great lakes. Brazil, on the contrary, lies almost entirely within the tropics, mainly between the southern tropic and the equator, a comparatively small portion only of the country reaching southwards into the temperate zone. In order rightly to understand the history of the development of both States, we cannot bear this important circumstance too carefully in mind. By means of it and its immediate consequences are naturally, next to the nationality by which it has been colonised, to be explained the differences in the social phenomena, as well as in material and intellectual development, between this tropical Empire and the great northern Republic.

2. *Extent—Political Divisions.*

It is impossible to determine with exactitude the total area of Brazil, nearly all the frontier lands being still matter of litigation; and, in the absence of reliable maps and surveys, the extent and position of these border districts themselves can only be approximately ascertained. According to the calculation of the Commission entrusted with the preparation of a general map of Brazil, its superficial area is 3,219,083 English square miles, including the regions confining on Guiana, Colombia, and La Plata, where the frontier line remains still to be settled by special treaties. This area is distributed in very unequal portions over twenty provinces and one neutral municipality.

3. *Natural Resources—Fauna—Cattle—Horses—Sheep-Farming.*

The topography of this vast region, forming the fifteenth part of the land surface of the globe, a fifth of

the American Continent, and more than three-sevenths of South America, is still very inadequately known. The most noteworthy points connected with it have already been indicated in previous chapters; it will therefore be enough here to direct attention to the extraordinary natural resources of the Brazilian empire.

Its immense territory, embracing a great diversity of climate—overgrown in one place with virgin forests, in another spread out into grassy uplands—is inhabited by a number of indigenous animals, many species of which are valuable as articles of human food. It is nearly destitute, however, of the larger game—even the guanaco of the Argentine and Patagonian Pampas being unknown. The rivers teem with fish, while turtles of various species are so numerous in the large rivers that a profitable trade has been developed along the Amazons by extracting the oil or the butter from their eggs. The manatee or sea-cow is abundant in the same localities as the large fresh-water turtle, and is valuable for the oil and meat which it yields. Noxious animals of large size are not numerous, the jaguar and the puma being restricted to the less frequented districts; but alligators swarm in the large rivers, and poisonous snakes are common. The surging sea along the Brazilian coast also everywhere abounds with marine animals, including the spermaceti whale, the porpoise, and many varieties of edible fish.

On the uplands rove prodigious herds of wild cattle and horses. The attempts at improving the breed of the various domestic animals in the country have certainly not been so far attended with the success that was expected. Still a cross breed of foreign and native horses was awarded prizes at the National Exhibition of 1866, and at the exhibition of agricultural produce organised by the agricultural school of Juiz de Fora.

In the provinces of Paraná and San Pedro do Rio

Grande do Sul, as well as in the municipalities of New Freiburg and Rio de Janeiro, sheep-farming promises to prove successful, the nobler foreign breeds especially thriving well. From these and the older stock, wool of an excellent quality has been obtained and exported, apart from the large quantities of the raw material supplied to the looms of Minas Geraes.

4. *Ornithology—Vegetation—Valuable Medicinal and other Plants.*

For number, variety, and splendour of plumage, the feathered tribes of Brazil are specially remarkable. The *uira*, as brilliant as the guinea fowl, almost exceeds the condor in size and strength; the *seriama* seems to occupy a middle position between the ostrich and the stork, and runs with incredible speed; while the macaw, with its blue and scarlet plumage, the countless parrots, green and red, blue, yellow, and orange, the numberless humming-birds, tanagers, toucans, chatterers, and others, are unsurpassed in beauty by any birds in the Old World.

No inconsiderable portion of the marvellous arboreal growth of the Brazilian forests is valuable for trade and manufacturing purposes, either as timber, resin, fibre, oil, or fruit. Indiarubber, Brazil wood, arnotto, Brazil and coco nuts, rosewood, cedar, fustic, Brazilian or vegetable ivory, piassaba fibre, copaïba, numerous fancy woods highly prized by the cabinetmaker, and dyewoods of various sorts, impart a special value to the Brazilian forests. The most important of the dyewoods are the so-called Brazil wood (*Cæsalpinia echinata*), tagatiba (*Maclura affinis*), red mangrove (*Rhizophora mangle*), various kinds of indigo and urucu (*Bixa orellana*).

To all this must be added sarsaparilla, vanilla, sapucaya nuts, copal, cloves, cinnamon, tamarinds, ipecacuanha,

all largely exported. The principal fruits are the pine-apple, bananas, oranges, passion-flower fruit, mango, custard apples, guava, cashu, rose apples, musk and water melons. Maize, wheat, beans, rice, cassava, and coffee are extensively cultivated, nearly half of the coffee of the whole world being produced in Brazil. Crops of sugar, tobacco, cotton, cacao, and some tea are also raised, the last named principally in the provinces of Rio de Janeiro and San Paulo; Minas Geraes also produces from 15,000 to 22,000 lbs. of a better quality than that of San Paulo. *Maté*, or Paraguay tea, is cultivated only in the province of Paraná.

5. *Vast Mineral Wealth—The Diamond Fields.*

World-renowned are the mineral riches of Brazil, consisting chiefly of diamonds and other precious stones, and gold... The most famous diamonds are found in the two provinces of Minas Geraes and Matto Grosso, both of which are of the same geological formation as the districts in which these gems have been elsewhere discovered. It is also remarkable that the very finest specimens are found in the most unhealthy districts, and this industry is said to have already cost the lives of 100,000 people. The gold mines have begun to fall off, and now produce not more than one-fourth of the average yield during the past five-and-twenty years.

Brazilian diamonds, though of the purest water, are small compared with those found in India. One, however, of very large size has been discovered in the country. It is 125 carats, and under the name of *Estrella do Sul*, or the "Southern Star," figured at the Paris Exhibition of 1856, as a rival to the Koh-i-nur, or "Mountain of Light," which produced such a sensation at the first London Exhibition in 1851. The Crown of Portugal possesses the largest and richest collection of Brazilian diamonds.

valued at nearly £3,000,000. Between 1730 and 1822 the Brazilian diamond fields may have yielded as much as five million carats in weight, while the total yield down to 1850 is said to have been 44 centners, approximately valued at £22,500,000.

Besides gold and precious stones, the latter including emeralds, sapphires, rubies, topazes, beryls, tourmalins of various colours, and garnets, Brazil possesses large deposits of the useful minerals. In the province of Paraná, and near its capital, quicksilver is as abundant as in the great quicksilver mines of Peru and Europe. Copper exists in large quantities in the provinces of Matto Grosso, Minas Geraes, Bahia, Maranhão, Ceara, and especially in Rio Grande do Sul.

Manganese, lead, iron of excellent quality, tin, antimony, bismuth, and arsenic, are also found.

6. *Population—Foreign and Native Elements.*

The population of Brazil is estimated at 9,450,000. But the statistical department having only been able to take a partial census, embracing eleven out of the twenty provinces, and calculating the rest, this figure is merely approximate, and under a more complete enumeration it may probably have to be considerably modified. The above total excludes the wild or wandering Indians, but includes the slaves, 1,016,262 in number.

As elsewhere in America, we are here in presence of two great and distinct ethnographic elements in the population—the aboriginal inhabitants or Indians, and the European colonists, which are again divided into various sub-classes. We have likewise to deal with a large ingredient of the African race, the pure breed, and the chief varieties of half-caste, which latter contribute so largely to the total of Brazilian population.

7. *The Civilised Indians.*

The Indians are divided into two distinct classes—the wild or independent, and the *Indios mansos*, or *Indios ladinos*, as the reclaimed aborigines are called. The latter, in the northern provinces, have, to a large extent, settled in the neighbourhood of the smaller towns, and intermarried with the civilised population.

Some of the so-called *Indios mansos* are found in the interior, residing in small communities, the remains of the Indians of various tribes, belonging to former missions. In Pará and Amazonas they still constitute the great mass of the whole population, and here consequently we meet in most abundance with the various grades of half-caste Indians and their descendants, forming a substantial element of the lower classes, and diversely occupied as fishermen, hunters, day labourers on the plantations, domestic servants, herdsmen's assistants, soldiers, but most frequently as sailors on board the vessels engaged in the transport trade between the coast and the interior.

The so-called *Indios mansos*, or *da costa*, on the seaboard between Bahia and Rio de Janeiro, are a pure unmixed race, nowhere forming communities of any considerable size. Their otherwise numerous *aldeas* (hamlets or settlements, or rather camping places) have either disappeared and been abandoned, or else have been converted into townships, with a mixed Portuguese population. The wars of the Portuguese with the Dutch and French, but especially the oppression of the Indians after the expulsion of their protectors the Jesuits, have caused these former masters of the sea-coast to give way before its present rulers. Until recently all the laws enacted for the protection of the Indians were utterly ignored in Brazil, where the red man was more than ever required to do the work of the slave. For a long time the natives

were everywhere hunted down in South America, and openly sold in the slave-markets. The Catholic clergy were the first to raise their voice against these atrocities, and soon became practically the protectors of the aborigines. Of late years the Central Government has insisted on the enforcement of the laws against Indian forced labour and kidnapping, and the practices have come to an end, at least as far as regards private persons.

8. *The Wild Indians—Numerous Tribes—General Classification.*

The wild or independent Indians of Brazil are split up into an extraordinary number of tribes or hordes, showing certain points of resemblance in their physical features, temperament, mental qualities, manners, customs, and usages, but in their speech presenting an endless variety of idioms. According to Von Martius, the number of Brazilian tribes amounts to upwards of 250, differing as much in their ethnographic as they do in their linguistic features. Nay, every fresh enumeration of the Indians under their present names not unfrequently shows that many tribes hitherto supposed to be identical are really distinct, while, on the other hand, a corresponding number of distinct tribes become grouped under the same name. Some of those so-called tribes, although speaking languages distinct from those of their neighbours, consist of but very few families.

The traveller A. d'Orbigny groups together all the Brazilian Indians as one race, under the common name of Brazilo-Guarani Indians, assuming their real type to be that of the Guaranis, which are distinguished from the other great Indian families of South America. But the various idioms spoken by these tribes cannot be thus reduced to one general stock. A careful study of these idioms

has, nevertheless, enabled Von Martius to arrange them under certain distinct heads, as several of the more numerous tribes are found to speak dialects more or less akin to each other. He distinguishes altogether eight such groups of languages in Brazil. These are the *Tupis*, the *Gês* or *Crans*, the *Gayatacas*, the *Crens* or *Guerens*, the *Guck* or *Coco*, the *Parexis* or *Parecis*, the *Guaycurus* or *Lengous*, and the *Aruac* or *Arawak*—the last two, however, dwelling mostly on the northern frontiers of the empire.

There is, however, a *lingoa geral*, or common Brazilian speech, by means of which the traveller may, in case of necessity, make himself understood by all the Brazilian tribes which have relations with the civilised villages and with traders. The Jesuits soon became convinced that in order to spread the gospel amongst the natives of South America, it would be necessary to employ, not a European, but some native speech. Their choice lay between the Quichua, the cultivated language of the empire of the Incas, and the Guarani, or rather the language of the Tupi hordes; the former for the Peruvian and other tribes at one time belonging to or influenced by the ancient Peruvian empire; the other for the tribes dwelling on this side of the Andes. Thus arose the *lingua geral*, or common speech, which is in fact the Tupi-Guarani language we have already spoken of in describing the Guaranis of Paraguay. It owes some of its softness as a spoken language to the use that the Portuguese, lay as well as clerical, have made of it. The attempt to render it general was attended with astonishing results, so that it now affords a common medium of intercourse to all the innumerable Brazilian tribes.

9. *The Tupi, Parexis, Arawaks, and other Independent Tribes.*

These tribes differ in many respects widely one from

A CAIOÁ CHIEF

To face page 417.

the other. The Tupis of the banks of the Amazons show a surprising nautical skill; yet, like all the other Tupi tribes, these people were at one time cannibals. However strange it may appear, anthropophagous races do not always occupy the lowest class, but are in most cases rather superior than otherwise to their neighbours, always excelling them in courage and martial prowess. Hence the Tupis also are found to be the most advanced of all the Brazilian tribes. Some sections of Tupis were also distinguished for their agriculture, manufacture of weapons, pottery, nets, and cloth, as well as for their superior houses and tribal economy.

The Tupis live exclusively in the woodland districts, while the Guaycurus rove over the steppes or pampas in quest of game or fish. Socially they rank higher than other tribes, inasmuch as their chieftainships are hereditary.

The Parexis live on the produce of their fisheries and plantations, and are peacefully inclined, at least in their own estimation.

On the other hand, the Gês, who are the finest, the most robust, and tallest of all the Brazilian tribes, maintain perpetual feuds among themselves. They stand at one of the lowest stages of material civilisation, but are distinguished above others by a healthy tone of morality in domestic life.

Akin to them are the Botocudos, who are the most degraded of all the Brazilian tribes.

Far higher in the social scale are the kindly Arawaks, the Caioás (who form the subject of two of our illustrations), the warlike Mundrucus, the Mauhés, the Juris, the Passés; and even the cannibal but robust and well-built Miranhos, who are skilled in the construction of excellent hammocks. This last-mentioned tribe inhabit the banks of the Japurá, one of the large affluents of the Upper Amazons, on the left bank. The Caioás inhabit the interior of the province of Paraná.

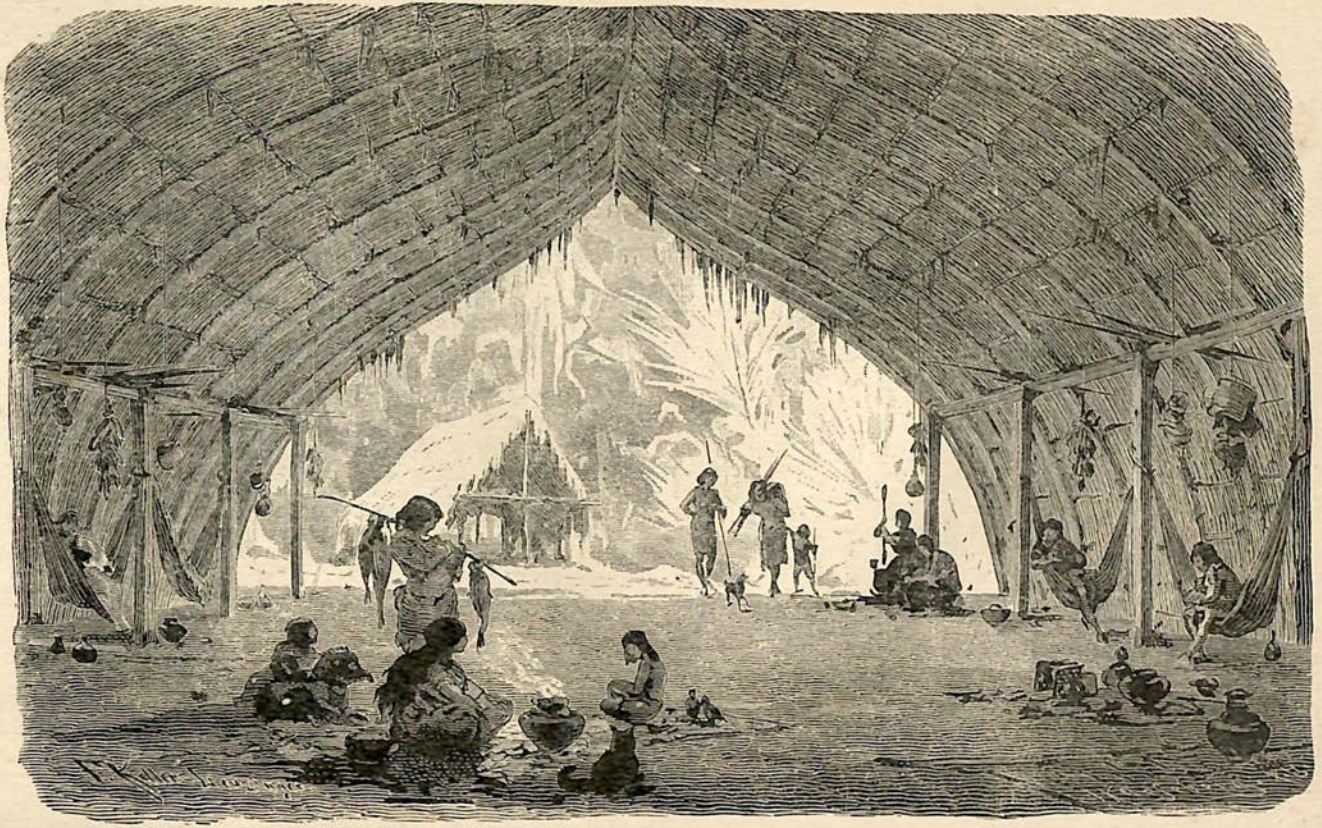
10. *The Portuguese—The Brazilians properly so called.*

The European and other foreign elements no more form one homogeneous mass than do the aborigines. Apart from the few sporadic members of sundry nations that have recently found a home in Brazil, they may be at present divided into three large groups, which, taking them according to the order of their arrival in the country, are the Portuguese, the Negroes, and the Germans.

The most important section of the population are undoubtedly the so-called Brazilians, that is, the descendants of Portuguese settlers. At the same time the number of pure-blood Whites. or Creoles proper is doubtless very limited, the early colonists, and, for the matter of that, the later also, having contracted alliances with the native coloured women. Portuguese women very rarely accompanied the men in their voyage to Brazil, where most of them expected their residence would be only temporary. At the time of the separation from the mother country also a great number of Portuguese families were expelled the State, victims of the senseless hatred everywhere manifested by the Creoles in Southern as well as Central America, and the West Indies, against men of the same nationality as their own forefathers.

The immigration of Portuguese has been, to a large extent, especially of late years, from Madeira and the Azores, these sources having continued to supply the largest number of Whites to the Empire after its emancipation. But the Brazilians do not long retain the national characteristics of the people from whom they sprang. As a rule they are of low stature, slight build, and of sallow or dark complexion. Although physically weaker, and totally destitute of the laborious and thrifty habits of the Portuguese, they may be said to retain much of the practical sound common sense which distinguishes the race from which they spring.

But even the Brazilians themselves have developed



INTERIOR OF HUT OF CAIOÁ INDIANS.

To face page 419.

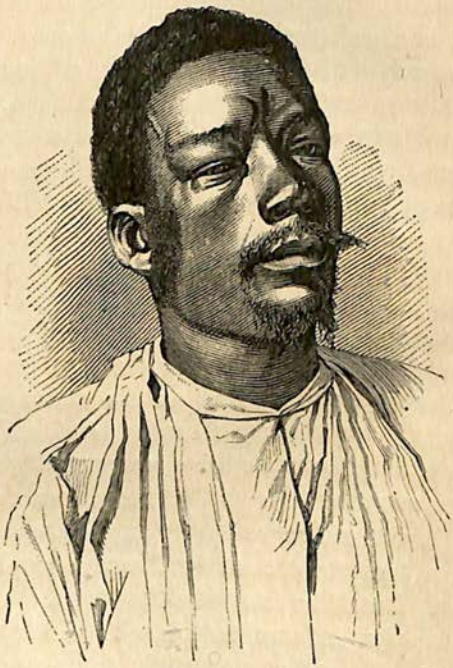
several more or less distinct physical types, according to the various provinces in which they have settled; those of São Paulo being especially noted for their strength and energy. These "Paulistas," as they are called, have played in times past the leading part in the great work of discovery and colonisation of the interior. The white Brazilians are found mainly in the large towns, but, as already remarked, they form but a very small section of the whole population. It has been repeatedly maintained that nine-tenths of the Brazilians are half-castes, but the proportion is mere guess work, and is given by other authorities as only four to one.

The morals of the Brazilian element of the population have not always been described in the most flattering terms. The general judgment places them in this respect far below their Spanish American neighbours. Still there is a bright side to the picture, and the impartial observer, Von Tschudi, gives prominence to two favourable traits in their character —their love of learning, and the great respect shown by children to their parents. A change for the better, in every respect, is rapidly taking place since the adoption of European and North American ideas with regard to the treatment of women; the old Portuguese or Moorish custom of immuring wives and daughters, and denying them the benefits of education as well as social intercourse, being now generally abandoned.

The same writer tells us that the poorer classes in the highland districts are very scantily supplied with food, being worse off, on the whole, than the Negroes employed on the plantations. But if he is stinted in his food, the Brazilian of the lower orders indemnifies himself by an extra consumption of spirit—the cashaça, or rum of the country; and such is the influence of race, that the darker the skin, and the less pure the blood, the more does he indulge in drink.

But the cultured Brazilian is exceedingly temperate, and we may add to his praise, he is extremely hospitable to strangers, in their presence showing himself utterly un-

mindful of his social rank. The treatment of the domestic and out-door slaves no doubt varies greatly according to the temper of their masters; but the better classes amongst the Brazilians treat them, on the whole, with great consideration. Cruelty or inhumanity they never indulge in, and whenever a slave happens to be brutally treated, we may be sure that his master is either of the coloured race himself, or else will, on the first occasion, vaunt his pure Portuguese descent.



BRAZILIAN NEGRO.

11. *The Negroes—Slavery.*

The Negroes, slaves and freedmen, taken together, although the importation from Africa ceased a generation

ago, still form the most numerous unmixed race in Brazil. While in Spanish American republics their numbers are small and continually decreasing, the proportion of the Africans to the rest of the population in the Empire is alarmingly great. It is quite certain that this proportion, as well as the absolute number of the blacks, has fallen off since the introduction of slaves has been rendered illegal—a falling-off partly due to emancipation, and partly to the fact that the births are exceeded by the

BRAZILIAN NEGRESS.

mortality. This again is owing to the excess of males over females among the slave population, more men than women having been imported when the trade flourished. The rearing of the Negro children, generally attended to

by the mistress of the house, is exceedingly difficult, many losing fully three-fourths of them, although no pains are spared. The critical period is the time of weaning, the Negro children showing themselves much more sensitive to the change than those of other races.

Although scattered over the whole land, still the blacks are most numerous in the provinces where the sugar-cane is, or rather was, the chief product, for it is now everywhere on the decline. In many districts of Bahia and Pernambuco they are in an absolute majority, and are also, as a rule, the most robust element of the population. This is specially true of the "Minas Negroes," imported originally from the Portuguese factories in Angola, a fine vigorous African race that cannot be without influence on the future of the country, especially since the abolition of slavery.

12. *Social Habits—The Capoeiragem—Murderous and Suicidal Manias.*

As to their lives, we learn from Tschudi that legalised or consecrated marriages are the exception. The reason is because the African strongly objects to be tied for life, and as Catholic marriages are indissoluble, the greatest disorders resulted from the former practice of obliging them to have their unions blessed by the Church. Hence they have lately been left entire freedom in this respect.

The slaves easily acquire their freedom, and the number of those that have been already enfranchised has been estimated at 1,121,000. Nor can there be any doubt that this number might be easily swollen if the Negroes could be induced to save the trifling sum required to purchase their charter of freedom, instead of drinking and gambling it away as they usually do.

The free Negroes, slaves, and Mulattoes, are at times

seized by a sort of bloodthirsty mania of a very singular nature. They have formed themselves into a kind of murderous association, known as the *Capoeiragem*, the members of which will occasionally run amuck through the streets like people possessed, blindly impelled by an irresistible impulse to cut down the first person they meet, whether he be a black, a white, a Brazilian, or a stranger. As soon as a few luckless beings have thus fallen victims to their sanguinary frenzy, the *Capoeiras* disappear without leaving a trace behind them, and after having satisfied the murderous impulse of the moment by the perpetration of some frightful outrage of the sort, the Negro will often be seen attending to his domestic duties with the most innocent air imaginable, and as if he had not quitted the house the whole day.

The Capoeiragem is probably an African institution that has been transplanted to Brazilian soil by some of the Negro tribes of the interior. In many respects it recalls the well-known similar murderous mania prevalent amongst the Malays of the Eastern Archipelago. It is by no means a rare occurrence for slaves to kill their masters while acting under the influence of this strange impulse. But on the other hand the number of slaves that perish at the hands of their masters is quite as great. A singular method of revenge, sometimes indulged in by the slaves on a plantation, consists in a sort of suicide *en masse*. They will form a general resolution to poison themselves all round, and will carry it out with the greatest stoicism. Tschudi mentions the case of a planter universally admired for his kindly nature, and who yet saw his Negro slaves from day to day poisoning themselves off by the dozen. The conclusion this judicious writer came to, after much experience and earnest consideration given to the subject, was that the only event that could involve the ruin of Brazil was the emancipation of the slaves before the State had amply pro-

vided beforehand for the change. Some such provision has indeed, been secured by the conditions of the law of emancipation passed by the Senate and House of Assembly, which received the Imperial sanction on the 28th of September 1871. This law enacts that "from that date all children henceforth born of slave women shall be considered of free condition." Such children are not to be actually free, but are to be bound to serve the owners of their mothers for the term of twenty-one years, under the name of apprentices. The apprentices will have to work, under severe penalties in case of disobedience, for their hereditary masters; but will be protected by the proviso that if the latter inflict on them excessive bodily punishment, they are allowed to bring suit in a criminal court, which may declare their freedom. A final provision of the Act emancipates the slaves who are State property, to the number of 1600, under the condition that "the slaves liberated by virtue of this law remain for five years under the inspection of the Government." They are bound to hire themselves out, under penalty of being compelled, if living in vagrancy, to labour in the public establishments.

13. *Half-Castes—Mulattoes, Criolos, Mestizoes, Cafusos, etc.*

The compound mixture of the three races—Whites, Blacks, and Indians—has given rise to endless half-caste types, or mongrel varieties of the human family, known by a great many distinctive names, some of which, however, are entirely local or provincial. A considerable number of these half-castes, especially of African blood, are still formally in a state of slavery.

By the term *Mulattoes* are understood in Brazil, as elsewhere in America, the descendants of Whites and Negroes, while *Mestizoes* are here almost exclusively the offspring of the Indians and Negroes. The term

Creole, in Portuguese *Criolo,* is exceptionally applied to the Negroes born in the country, and not to the whites, as in the West Indies and Spanish America. Before the declaration of independence the Portuguese born in Brazil was called *Brazileiro* (Brazilian), or *Filho da Terra* (child of the country), in contradistinction to the European Portuguese, or Portuguez *legitimo,* or *Filho do Reino* (child of the kingdom, or old country).

A MULATTO.

Cariboco, in the Tupi language meaning a half-breed in general, is now universally applied to individuals of dark complexion, whether descended of Indians and Negroes, or Indians and Mulattoes. The Negroes have contracted various alliances with the Indians, and, especially where the aboriginal population has not disappeared, we often meet with many such varieties, shown by the diverse shades of their complexions. The darker types are by the Indians also called *Tapanhuna,* and other shades *Xibaro,* while the Brazilians call the darker shades *Cafuso,* a term also frequently applied to the descendants of Indians and Negroes, in Spanish America known as *Zambos.*

It should be remarked that the contempt and hatred of the Blacks, so universal in the United States, and in English-speaking colonies, is very little felt in Brazil. Even the terms Cafuso and Cariboco imply no particular sense of humiliation, though *Mameluco* or *Mamaluco,* now

frequently applied to the children of Whites and Indians, was originally a term of opprobrium. The Jesuits and Spaniards in Paraguay applied it to the encroaching and colonising "Paulistas," who often intermarried with Indian women. Thus used, it served to brand these intruders with an offensive nickname, for their cruelty to the natives and their hostility to the missions. The half-caste races, including the *Indios mansos* or *da costa*, are spread over the whole land, and in the north form the majority of the population. The Indian element is most conspicuous in the interior, in the so-called Sertãos of the north-eastern provinces, the Amazons and the lower valleys of its great affluents. Here also may clearly be seen the deterioration of morals, resulting from the unnatural alliance between two races ethnically differing entirely one from the other. The Mameluco of both sexes is naturally indolent, frivolous, easy-going, and sensual; but there are numerous exceptions, and many enterprising traders are to be met with who belong to this class of the mixed races.

14. *Recent European Immigrants—German Settlements.*

In the large towns, side by side with the white Brazilians, there are also settled a considerable number of foreigners from Europe and North America, Portuguese, Frenchmen, Englishmen, and Germans, mostly belonging to the mercantile and industrial classes. In the smaller towns on the coast and in the interior the number of these foreigners is insignificant; the Germans, however, form an exception to this rule, so far as the southern or more temperate provinces are concerned, for they have here already formed considerable colonies. In these regions the German type persists much more tenaciously than it does in the United States, where it soon becomes Americanised. Yet even here their gradual assimilation to the surrounding

PACIFIC OCEAN
ATLANTIC OCEAN
ARGENTINE
CONFEDERATION
CHILE AND PATAGONIA

elements is unmistakable, and we are assured by the careful observer Schultz that although their light complexion, blue eyes, and fair hair, at once betray their Teutonic descent, they have in their new home already acquired some characteristics of the southern races.

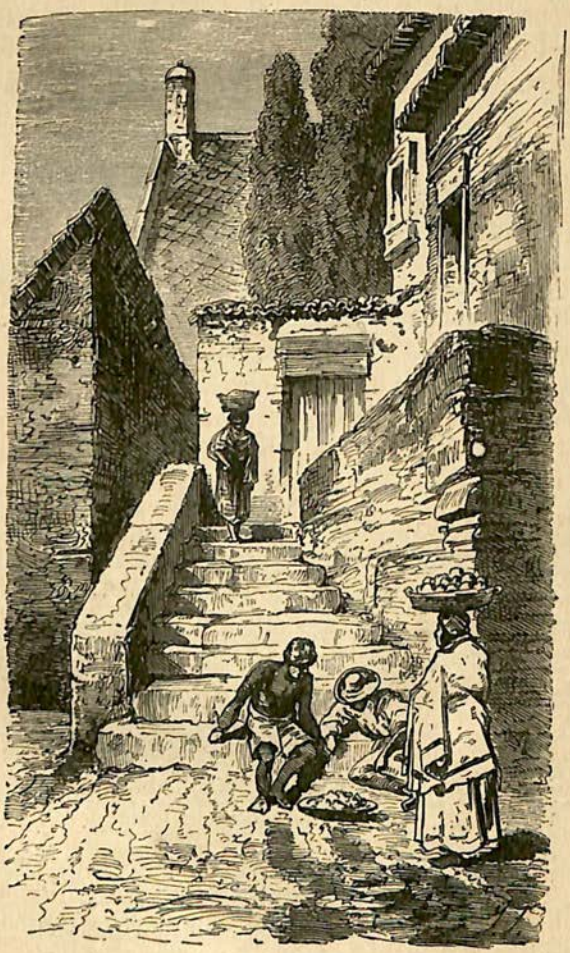
The most important of these German settlements are Petropolis, Dona Francisca, San Leopoldo, Santa Catharina, Alcántara, Santa Isabel, Brusque, Blumenau, and Santa Cruz. In the province of San Paulo there are also some Swiss colonies; and it is noteworthy that all these Teutons avoid contracting alliances with the coloured races, as carefully as do their Anglo-Saxon kinsmen elsewhere, in this respect contrasting strongly with all the Latin peoples. In Rio Janeiro the French population is very numerous.

15. *Seaports—Bahia, Pernambuco, etc.*

The most important Brazilian cities are seaports, but few places of any consequence being found in the interior, even the capitals themselves of the various provinces being of little account. On the other hand—apart from Rio Janeiro, capital of the Empire—the seaports of Pará and Parahyba, Pernambuco and Bahia, in the north, Desterro and Porto Alegre in the south, all present some points of interest.

The town that the traveller from Europe first makes the acquaintance of is Pernambuco. Stretching rather away from the coast, it produces a poor effect when seen from the water, yet it possesses a population of 90,000 souls. The houses are partly built with pitched roofs after the European fashion, presenting by no means an elegant appearance. A little below Pernambuco is situated the university of Olinda, in the midst of a very picturesque neighbourhood.

Bahia, the old Brazilian capital, forms a marked contrast to Pernambuco. It is situated, like Lisbon, on a



STREET IN BAHIA.

range of hills stretching along the sea-coast, and presents a wonderfully romantic aspect. The sea of the magnifi-

cent bay, on the shore of which the city is built, is of an emerald green colour, while the clear blue sky enhances the effects of light and shade produced by the dazzling white houses and the tropical vegetation. The traveller is ravished by the splendour, the luxuriance, and the novelty of the prospect, where nature aids art in a way never seen in Europe. In the harbour are seen the flags of all nations, contributing much by their gay appearance to the general effect.

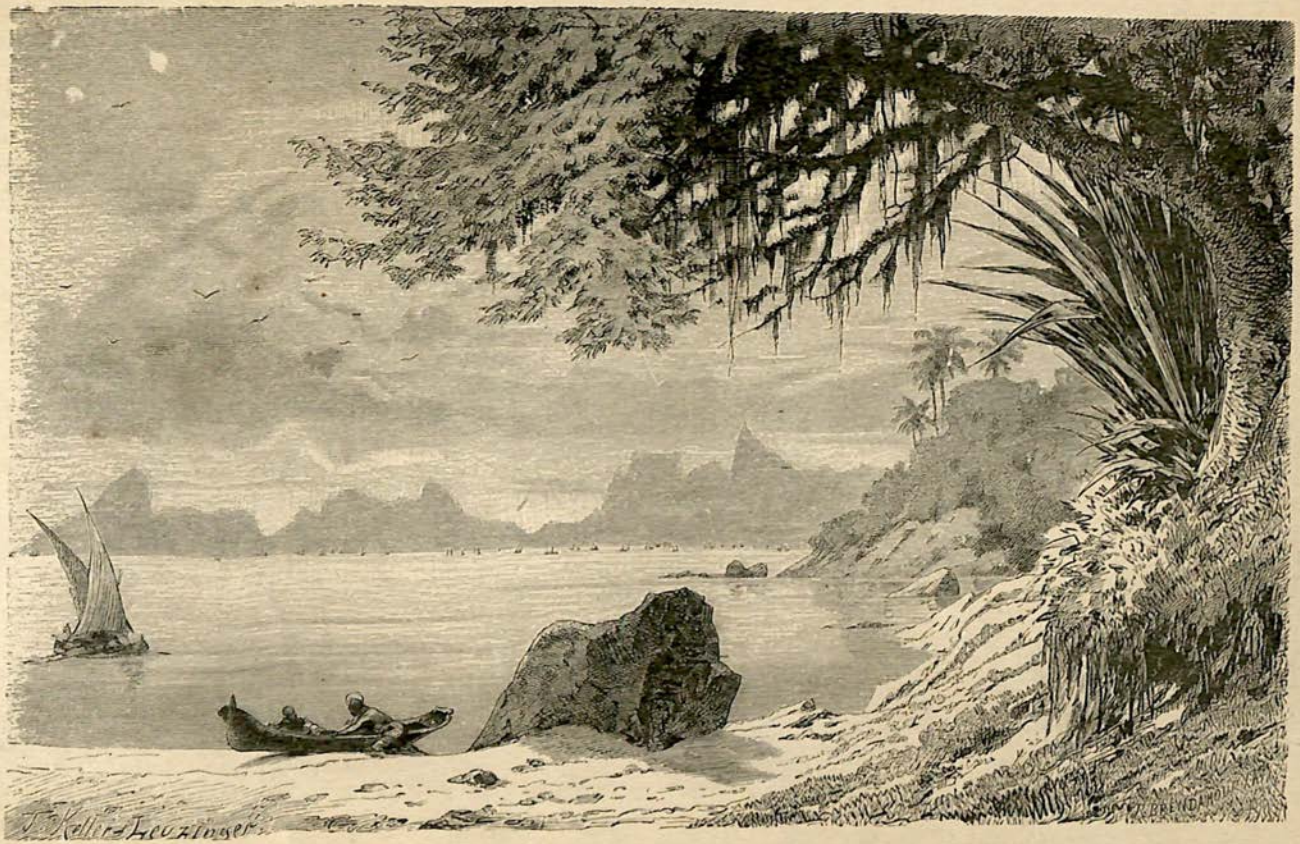
Bahia, with its suburbs, has a population of about 130,000, boasts of a university and an exchange, is the seat of an archbishop, and, like most Brazilian towns, is fortified. The majority, or say two-thirds of the inhabitants are Negroes and Mulattoes. But their religious welfare is carefully provided for, if we are to judge from the extraordinary number of churches, amounting to sixty-five altogether. There are in some streets as many as two or three together, and in one public square no less than five, but all built in the monotonous style peculiar to the Jesuits. The streets, winding up the sides of the hill, are so uncommonly steep that the wayfarer finds it sometimes difficult to maintain an erect posture without falling backwards.

Bahia is unfortunately one of the most unhealthy places in the empire, as shown by the numerous victims of yellow fever and other local epidemics who perish here annually. It was here that this fatal epidemic of the tropics first broke out, in April 1850, spreading in a few short weeks like wildfire up and down the coast to all the ports of the empire. It did not penetrate the interior, even on the large navigable rivers. Since the above-named disastrous year, the mortality has never been so great, although the fever has become endemic in some of the ports first attacked.

16. *Bay and City of Rio Janeiro—Romantic Scenery.*

The many picturesque and varied beauties of the famous bay of Rio Janeiro never fail to take the stranger by surprise. A series of grotesque hills on the left of the entrance especially attracts universal attention. Owing to their striking resemblance to the outstretched human figure, they have collectively been christened "The Stone Man," of which the famous "Sugar-loaf" hill forms the feet, and the often-described "Gavia" the face in profile. The bay itself presents one of the grandest views it is possible to imagine. Huge granitic piles, assuming the most fantastic shapes, present steep sides descending sheer into the water, forming on either side of the entrance a line of natural fortresses. Within the vast oval basin, some 30 miles long by 20 broad, the horizon is everywhere bounded by the magnificent ranges of the Serras de Vinoa, de Tingua, da Estrella, dos Orgãos, do Morro Queimado, and others.

This little land-locked sea, the receptacle of a number of rivers, streams, and torrents rushing down from the surrounding hills, is studded with many islands and rocky crags, amongst which the most noteworthy is the island of Villegagnon, with its fort of the same name. At the foot of the conical rocky hill called Pão de Azucar, or the "Sugar-loaf," are the batteries of São Theodosio, on a projection of the land opposite the fort of Santa Cruz, with the little fortified island da Lagem between the two. Farther on is the Ilha das Cobras, on which are situated many of the country seats of the Brazilian gentry. On the western shore to the left are the suburbs of Botafogo, north of the headland known as Morro do Flamingo, and still farther to the north the little chapel of Nossa Senhora da Gloria, all uniting in one magnificent picture. The eastern shore forms at the entrance a deep *sacco*, or bight, flanked



BAY OF RIO JANEIRO.

To face page 430

FRUIT-SELLER IN RIO JANEIRO.

To face page 431.

by a projection of the land terminating in two points—the Punta da Nossa Senhora da Boa Viagem to the south, surmounted by a chapel, and the Punta do Calabouço on the north.

The city lies on the western shore of the bay. Its oldest quarter, which may date from the year 1564, is built on an irregular plain between two series of detached rocky hills, the southern series ending with the Punta do Calabouço, topped by the castle of S. Sebastian, and the northern terminating with the Morro Bento. Between these two points are the landing-places, the quays, and the Imperial Palace. A couple of miles beyond the suburb of Mata Porcos is the castle of S. Cristovão. But, like most Brazilian towns, Rio can boast of but few fine buildings, the cathedral and several convents being more remarkable for size than beauty. The Imperial Palace itself is a miserable structure, more like a barrack than a royal residence. The streets, also, are mostly irregular and badly kept, altogether detracting considerably from the impression produced by the view of the place from the water.

The country, however, in the immediate neighbourhood is extremely romantic, its beauty being much enhanced by the luxuriant vegetation of these tropical regions—the long, silky-green leaf-blades of the banana tree, the variety of graceful palms, and the infinite diversity of strange foliage and flowers. Of the primeval forest that once covered the hills and slopes only a few clumps of the larger trees have been preserved in the vicinity of the city. But the famous falls of Tijuca are still there, formed by a stream rising on the highest crest of the Tijuca cliffs, and rushing over a rocky precipice fifty feet high. Some years ago an Act was passed forbidding the further destruction of the forest trees on the hill-tops, in the belief that the rainfall in the neighbourhood

of the city was decreasing by the rapid clearing of the land; thus the crests and slopes of the magnificent hilly ranges in the rear of the bay have been preserved in something like their pristine luxuriance.

17. *São Desterro—Diamantina.*

Amongst the southern towns the most noteworthy is São Desterro, capital of the province of Santa Catharina, which has a present population of not more than 9000. Its situation is peculiarly romantic, occupying a little island off the coast famous for its splendid climate, especially beneficial to invalids suffering from affections of the chest. This place is also noted for the pretty objects here made of shells and fish-scales, in which, however, more skill than taste is displayed. Yet, like the well-known "feather-flowers" of Rio Janeiro, these and other articles, ingeniously carved out of coco-nuts and palm resins, command very high prices.

Noteworthy also is the little inland town of Diamantina, so called because it is situated in the heart of the diamond-fields of Minas Geraes, the next province inland from Rio Janeiro. In its outward features it differs little from other Brazilian towns, but it presents a great contrast to them in some other respects. Owing principally to the abundance of ready money, its inhabitants offer an exception to the general sobriety of the better classes in the Brazilian towns—English beer, champagne, port wine, strong liqueurs, and other drinks, being consumed in large quantities. There is altogether a population of from 8000 to 12,000, the whites and light-coloured half-castes being relatively more numerous than in any other town of the interior.

13. *Government—Constitution—Religion.*

Brazil is a hereditary constitutional monarchy, based on the charter of December 11, 1823, and the supplementary decrees of August 12, 1834, and May 12, 1840. This constitution is extremely liberal, and, theoretically, is framed in a most admirable manner. Though taking that of the North American Union as its model, it has adopted some of its provisions from the French constitution of 1791 and from the Portuguese of 1822; its founders being also influenced by the principles of Benjamin Constant. It thus, in some respects, departs considerably from all other forms of government, a peculiarity which is especially seen in the creation of four instead of the more usual three estates of the realm. In accordance with Benjamin Constant's views, there has been established a fourth or intermediate administration, which is in the hands of the sovereign, but which is found in practice not to differ substantially from the executive of ordinary constitutional governments. The four powers in the State may, in fact, be termed the legislative, the executive, the judicial, and the "moderating power," or the royal prerogative.

The franchise is extended to all native, or naturalised, free citizens twenty-one years of age, and having a yearly income from any source of £20; but the active militia and the clergy take no part in the elections, though women are not expressly excluded. Emancipated slaves, naturalised citizens, and non-Catholics, cannot be returned as deputies.

The Roman Catholic is the recognised religion of the State, but the right of private worship is accorded to all other forms of belief. The non-Catholics, whose number is very limited, enjoy a fair amount of freedom; they cannot be persecuted on religious grounds, their children are not compelled to receive the religious in-

struction imparted to Catholic children, and their marriages are perfectly legal.

The legislative power is entrusted to the Upper and Lower Houses (the Senate and the Congress), under the sanction of the Emperor, the deputies being elected for four years, and the Senators for life. The executive, at whose head is the Emperor, is administered by seven responsible ministers, all liable to removal. These are:—the ministers of the interior and public worship, of justice, finance, foreign affairs, war, marine and agriculture, trade and public works. Besides these, one of whom acts as Prime Minister, there is a Cabinet Council appointed by the Emperor for life, and receiving a yearly allowance from the State.

The judicature is perfectly independent, and consists of judges, and in criminal cases a jury—the latter dealing with the facts of the case, the former awarding the sentence.

19. *Provincial Governments—Public Instruction.*

Besides the general administration, each province, like the States of the North American Union, has its own individual constitution, so that the federate system, so general in the New World, has been extended, in some of its features, even to the Brazilian empire. Altogether this Transatlantic federal monarchy may be said to be in the enjoyment of a constitution nearly perfect in theory, although displaying many shortcomings in practice. The best laws and regulations, in fact, are after all no safeguard against political and social abuses, arising out of the imperfections of human nature itself.

As regards public instruction it may be mentioned that elementary teaching is entirely gratuitous throughout the empire. Compulsory education already exists in

some provinces, and is about to be introduced in many others. Owing to the effective way in which these provisions are carried out, and to the naturally keen intelligence of the children, the primary accomplishments of reading, writing, and arithmetic, are almost universal throughout the empire. There are altogether 3491 national schools—2343 for boys, and 1148 for girls—attended by 106,205 children, besides 448 private elementary schools for boys, and 254 for girls, attended by 19,162 children. There are moreover 230 secondary schools, giving instruction to upwards of 8000 of the more advanced pupils, to which must be added the Academy of Fine Arts, the Conservatorium of Music, and the special training schools, which are divided into fifteen distinct classes, and are attended altogether by near 2000 students, not including the 1280 in the ecclesiastical seminaries.

Amongst the scientific, literary, and artistic institutions of the Empire may be mentioned the *Academia Imperial de Medicina, the Instituto Geographico é Historico,* the Public Library, and the libraries of the Benedictine, Carmelite, and other monasteries, besides those of the Portuguese, English, and German literary clubs.

CHAPTER XXII.

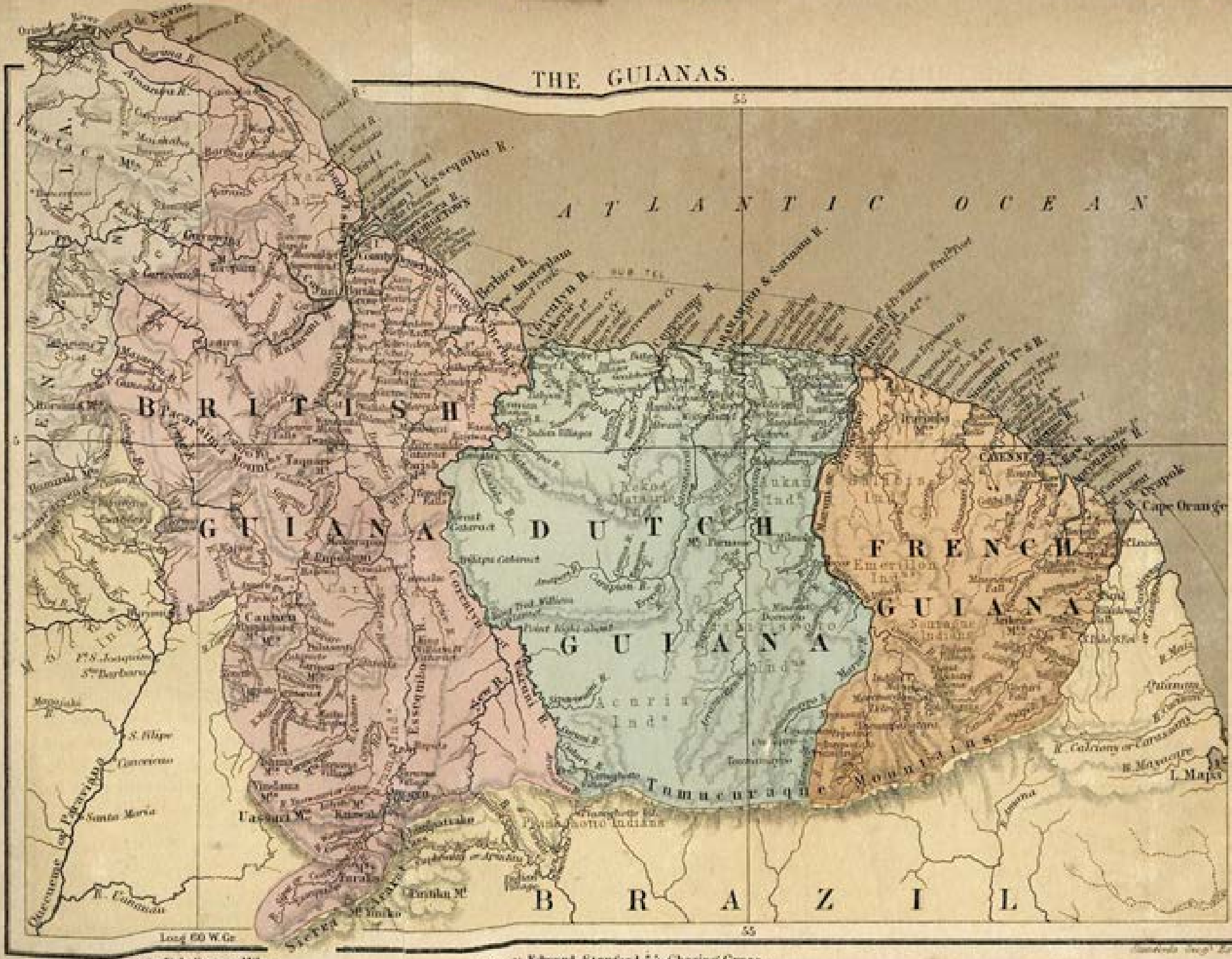
BRITISH, FRENCH, AND DUTCH GUIANA.

1. *Extent—Relative Size of the three Colonies.*

BEFORE taking leave of South America we must devote a few words to the region, situated north of Brazil and east of Venezuela, which forms the only remaining portion of the Southern Continent still held by European powers. Guiana, or Guayana, in its widest sense, certainly embraces the whole of the Sierra Parimé, thus including districts at present belonging to Venezuela and Brazil; but the term is now generally restricted to the colonial possessions of England, France, and Holland, in this part of the world. Formerly it was supposed to be rich in gold, and it was in this region that the unfortunate Sir Walter Raleigh, following the Spanish adventurers, placed his "El Dorado," or the gilded king. Gold is still found far in the interior, near the upper waters of the Caroni in Venezuela, and in small quantities in Cayenne, but the true wealth of Guiana lies in its fertile soil and boundless capabilities in regard to tropical produce. The English occupy the extreme west, and to them undoubtedly belongs the lion's share; British Guiana comprising the whole basin of the Essequibo, besides that of the Demerara and Berbice rivers, and the left bank of the Corentyne. It is the most flourishing, agriculturally and commercially, of all the divisions of the region.

To the east of the British section lies Dutch Guiana,

THE GUIANAS.



Scale of English Statute Miles.

London: Edward Stanford, 55 Charing Cross.

or Surinam. French Guiana comes next, extending to the northern boundary of Brazil, on the Atlantic seaboard, and containing the well-known penal settlement of Cayenne.

The total area of all these colonies cannot be accurately stated, their southern frontiers, that is towards Brazil, not having yet been accurately determined or surveyed. The interior also of these sultry and inhospitable regions is very little known. British Guiana alone has been to some extent explored, first by the brothers Schomburgk and C. F. Appun, and quite recently by C. Barington Brown, who has given us an interesting account of his experiences in the interior in his *Canoe and Camp Life in British Guiana.*

2. *Physical Features.*

Still there can be little doubt that the main physical features of all three colonies offer much resemblance. Apart from an oozy, fertile, but exceedingly insalubrious low-lying coast region, the land is hilly, and covered with primeval forests of a rank exuberant vegetation, peopled by an abundant fauna similar to that of Brazil, though generally consisting of different species; the birds, reptiles, and fish, especially being numerous and of the most varied description. These extensive woodlands are entirely in the hands of a small number of Indian tribes, including the cannibal Caribs, who, like the others, are gradually becoming extinct. The few whites, whether planters or others, living in Guiana, keep within the European settlements, or in their vicinity, situated almost entirely at the mouths of the rivers, and on the low and fertile lands of the coast.

3. *British Guiana—The Kaieteur Falls—Roraima.*

Of these colonies, that belonging to England, as we have said, is the most flourishing. It embraces an area of 85,000 square miles, and contained in 1881 a population of 252,000. Like all the neighbouring countries, situated in the tropical zone, the climate is hot and moist, but the heat in the coast districts is not felt to be oppressive. The thermometer ranges throughout the year in the day-time between 75° and 95° in the shade, and the temperature is moderated by gentle sea breezes during the day, and land winds at night. During the wet season the rain falls in torrents, but it seldom rains through an entire day, and the mornings generally open in bright sunshine. For Europeans, British Guiana is as healthy as most other tropical American countries.

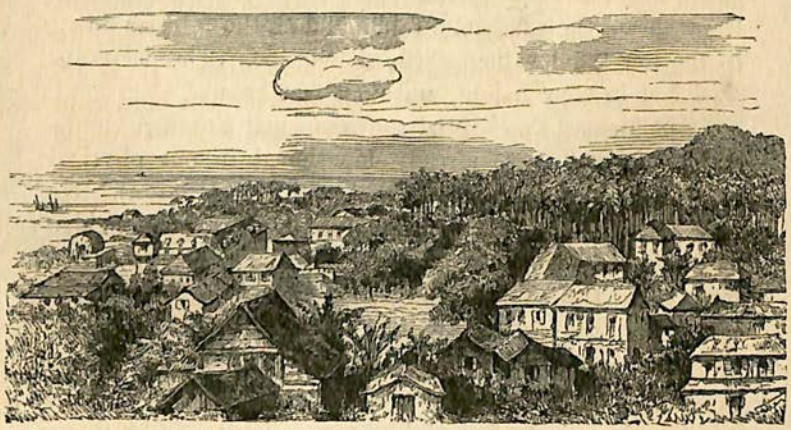
The whole coast from the Corentyne river to the Orinoco, a distance of 300 miles, is fringed by a belt of flat country, stretching for about 50 miles into the interior. This level district is covered with a rich clayey deposit, overlaid with vegetable mould, the decayed product of the thick jungle which formerly clothed this maritime region, but which has since been cleared to make room for plantations. A railway now runs along part of this fertile coast belt, from Georgetown to Mahaica, and will eventually be extended as far as Berbice; of other roads there are very few, nearly all internal communication being by water. Proceeding from the coast towards the interior, the country rapidly rises, and at a further distance the scenery becomes bold and mountainous; but, even here, there are many fertile valleys and plains, and the banks of the numerous rivers are bordered by strips of rich alluvial soil. Generally a luxuriant virgin forest clothes the land, but there are here and there tracts of open country, consisting mainly of grass land, but not well adapted to

pasture, owing to the sandy nature of the soil; these latter are most frequent in the distant interior, near the frontier of Brazil. Since the coffee plantations have fallen off, and the cultivation of cotton has ceased altogether, the chief staple of the colony is sugar, of which 120,000 hogsheads (besides rum and molasses) were exported in 1876. There is also a large trade in the timber of the country, 465,000 cubic feet having been exported in the same year, besides shingles and charcoal. The capital, Georgetown or Demerara, has a population of 36,562, including some 20,000 Negroes, half-castes, and Coolies. In April 1870 C. B. Brown discovered the grand Kaieteur Falls, one of the greatest wonders of the kind in the whole world. It is formed by a sudden dip in the bed of the Potaro, a western tributary of the Essequibo, the water at this point being precipitated over the edge of the sandstone table-land of the interior down to the low-lying valley of the Essequibo. The falls are 822 feet in total height, and 370 feet broad.

Mr. Brown also visited the renowned Roraima mountain, which we have already mentioned in our physical description of this part of South America (*vide supra*). He thus describes the scenery:—"Marching . . . over ridge and hollow, where small streams were numerous, we halted for a time on a ridge at the end of an extensive valley, in which ran the Arapus river. Nestling in the valley at our feet was a small village called Ipelemonta. From the opposite side of the valley a number of ridges intervened between it and the foot of Roraima. Turn in any direction I would, more wonderful scenery was presented to my view, from the great pink-precipiced Roraima in the north-west, looking like a huge fortification surrounded by a gigantic glacis, to the great undulating plain stretching southward as far as the eye could reach, where at the horizon land melted into sky."

4. *Surinam and Cayenne.*

The Dutch settlement of Surinam, whose chief town is Paramaribo, with a population of 25,000, does not appear to be in a very prosperous state; on the contrary, large sacrifices on the part of the mother country are necessary for its maintenance. There remains to be mentioned French Guiana, which is scarcely anything more than a penal settlement of the French Government. As in Surinam, colonial produce has here also considerably fallen off of late years; but, on the other hand, some tolerably rich gold mines have been discovered at Arataya, in the interior, and the river Approuague also washes down gold dust.

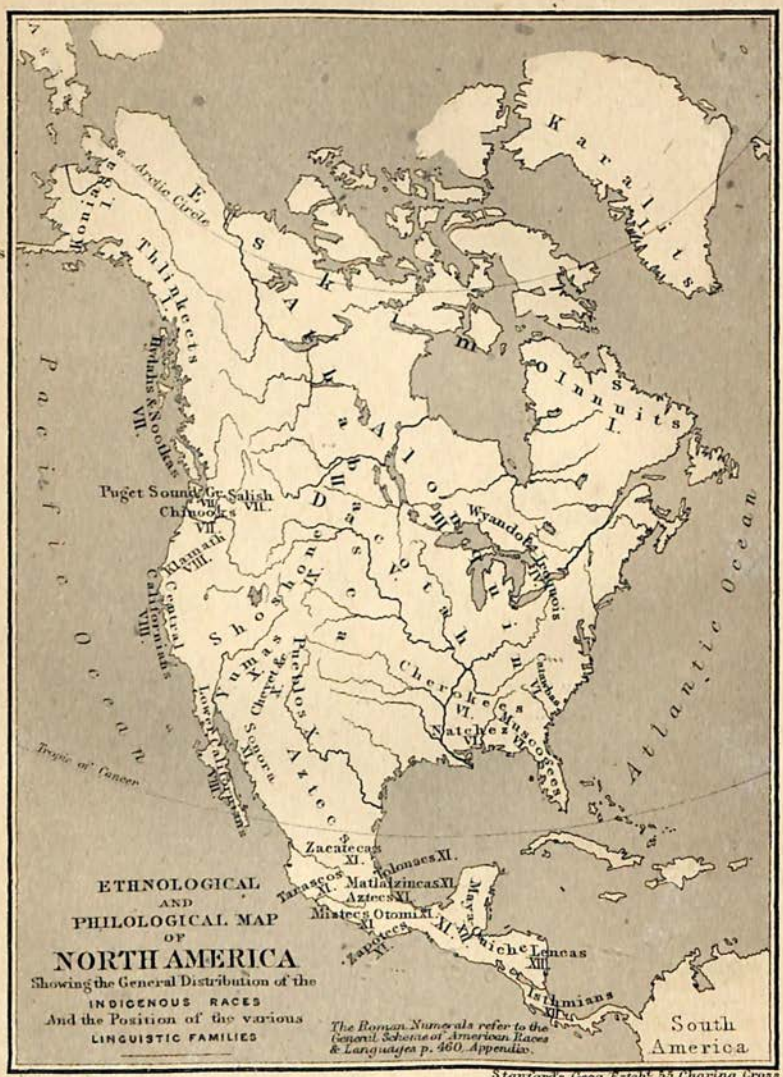


CAYENNE.

The capital, Cayenne, with a population of not more than 3000, is much dreaded on account of its deadly climate. The convicts, both political and ordinary criminals, destined to this station are devoted almost to a certain death. The other penal settlement, however,

on the Maroni river, is somewhat more favourably situated in this respect.

This river flows from the Tumakurak range, and forms the frontier line between French and Dutch Guiana, after a course of 380 miles discharging its waters into the Atlantic. In the healthy districts along its banks sundry penal settlements were established some years since, and large tracts of land were at the same time cleared for cultivation. The main object was to effect a reformation of the criminals by promoting lawful unions between the two sexes, and the results have surpassed all expectation. Not only those condemned to forced labour, but even those under simple arrest, eagerly sought the favour of being sent to the river Maroni, in order there to found a family. On their arrival in the colony they easily find an opportunity of marrying released convicts, who have been rewarded with a small piece of land for their good conduct while serving their time. It is recorded, strangely enough, that women who had been condemned for child-murder often prove the best wives and mothers. Altogether the domestic relations are in a very healthy state, ill-assorted or unhappy unions forming the exception. By this interesting colonial experiment a large tract of country along the borders of this river is being settled and cultivated by convict labour.


Aleuts
Arctic Circle
Esquimaux
Thlinkeets
Kaniagmiut
Kaniagmiut
Kaniagmiut

Stanford's Geog. Estab.t, 55 Charing Cross.

APPENDIX.

ETHNOGRAPHY AND PHILOLOGY OF AMERICA.

By A. H. Keane.

Introductory—Statistics—Problems.

According to Bollaert's estimate, the native American Indians, as they are called, numbered in 1863 about eleven millions, thus distributed:—

Mexico	4,000,000
Peru	1,600,000
Bolivia	1,400,000
Central America	1,000,000
Paraguay	700,000
Ecuador	500,000
United States	500,000
Other Countries	1,300,000

These eleven millions of human beings are said to speak from four to five hundred distinct languages, besides some two thousand dialects, that is to say, as many between them as are current amongst the eight or nine hundred millions of Europe and Asia together. Nor is it too much to say that this numerically small section of mankind has given ethnologists and philologists as much trouble as all the myriad inhabitants of the Eastern Hemisphere collectively. The aborigines of the New World undoubtedly present some of the most interesting and difficult problems to the anthropologist. We here find, on the one hand, apparent unity of race, with the most astounding diversity of speech; on the other, this very diversity in the substance of speech combined with absolute identity in its form or structure. We have further, with the exception of

the Eskimos, avowedly intruders from the north-east coast of Asia, an autochthonous race, if it is one and not many, totally distinct in its physical type and mental attributes from all other known races of mankind.

Hence arise many questions that, since the discovery of America, have necessarily occupied the attention of historian, philosopher, theologian, and naturalist alike, but which seem yet to be as far from solution as ever. Are all these innumerable tribes sprung of one stock or from many? How account for the astonishing number of seemingly distinct languages spoken by them? How explain the singular fact that, Otomi alone excepted, all these idioms, with all their radical differences, are yet cast, so to say, in one mould, have the same internal mechanism, belong to the same order of speech? Lastly, how comes it that this common order of speech differs essentially from those elsewhere prevailing?

Some of these questions can doubtless be fairly answered, but others admit of but partial explanation, while others again seem to have hitherto baffled all attempts at any satisfactory solution.

2. *Origin of the Native Races and Civilisations.*

And first, as to whence they came. The Asiatic theory, originally suggested probably by the difficulty of otherwise accounting for the civilisations of the Mexicans, Mayas, Dorichos, Muiscas, and Quichuas, seems now to be practically abandoned by the most recent and soundest ethnologists. It has well been remarked by Frederich Müller and others, that Asiatic influence must have shown itself most conspicuously in matters of every-day life, useful plants and animals, and the more simple industries that lie at the foundation of all culture. But in all these respects there is absolutely no connection at all between the respective civilisations of America and China or Japan.

Nor is it easy to understand how immigration from the north-east could in any way help to explain the social and political state of Anahuac, Yucatan, or Peru, such as it existed at the time of the discovery of the New World. On the one hand, the Samoyedes, Kurilians, and other semi-barbarous peoples of that part of Asia have themselves never got beyond the nomad state; and on the other, no traces of any such culture are found on the west coast of North

America, where we should expect to meet it had it been imported by way of Behring Straits. Recent linguistic and other investigations are moreover entirely opposed to the old idea that the Nahuas and Toltecs reached the Anahuac table-land from the north or north-west. We shall see farther on that the Aztec language, nowhere north of that point forms the basis of any linguistic family, while it is found in almost a pure state as far south as the parallel of Lake Nicaragua.

Hence the American civilisations afford no argument in favour of the Asiatic theory, and they must be practically regarded as developed on the spot, independently of all extraneous influences. Hubert H. Bancroft well remarks that "the tendency of modern research is to prove the great antiquity of the American civilisation, as well as of the American people; and if either was drawn from a foreign source, it was at a time probably so remote as to antedate all Old-World culture now existing, and to prevent any light being thrown on the offspring by a study of the parent stock."—(*The Native Races of the Pacific States*, ii. 85.) For the same argument applies of course to the origin as well as to the culture of the native races. If the Western Hemisphere was peopled from Asia, it could scarcely have been from any other quarter except the north-east. But in this case the Redskins must have retained some resemblance to the Koriaks, the Chukchis, and other peoples of that region, as do the Eskimos, who have undoubtedly entered Asia from the same direction. It might no doubt be said that the particular race preceding the Eskimo migration came bodily from Asia without leaving any trace behind them. But this merely puts back the difficulty one stage without solving it; for the question would still remain to be answered, whence came that particular race itself?

Altogether when we remember that most of the fauna and flora, no less than the civilisations of both hemispheres, are entirely different, and that geologically Labrador is the oldest land now above water, there seems no good reason for denying the claim of the Red man to be regarded as practically autochthonous. But if so much be not conceded, then the question of his origin can receive only a negative answer. Whatever he be, he cannot now be shown to be descended of any Asiatic, any more than any African or European race. To

the scientific ethnologist it seems as unreasonable to trace him to the Chinese, the Japanese, the Mongolian or Samoyede, as it must be to identify him, as has been done, with the Kymric or Gaelic Kelts, the Iberian Basques, the Bantu Mpongwes, or the lost tribes of Israel.

3. *Physical Characteristics of the Red Man.*

But if indigenous, the question may still be asked, Is the American Indian descended of one or many stocks? Relying upon certain salient physical and moral features, ethnologists are in the habit of treating the Red man as a unit, and there are perhaps few conclusions so unanimously accepted by them as that which declares the aborigines of the New World from Alaska to Cape Horn to be sprung of one common source, always of course excepting the hyperborean Eskimos.[1] The characteristics on which this assumption rests have been amply detailed throughout the course of this and the preceding volume, and it may therefore suffice here briefly to resume them.

Though presenting occasional points of contact with the yellow and other dark races, the American type, viewed as a whole, is too marked to be confused with any of them. Approaching, perhaps, nearer to the Mongolian than to any other, its most prominent outward features are:—Body moderately tall and robust, though less so than either the White or the African, and inferior to them also in working power; cranium rather long, flat, and receding; forehead very broad, but also very low and depressed, narrower above than below, thus giving greater prominence to the middle and lower features than in the case of any other race; sockets of the eyes very large, the under rim more curved than the upper; eyes them-

[1] Thus Lewis H. Morgan has shown that, while the terms of relationship and consanguinity are radically distinct in Iroquois, Algonquin, Pawnee, etc., the classification of kindred is the same; or at least identical in its fundamental characteristics, in these, and in fact in all the stock families, east of the Rocky Mountains, if not throughout the whole of the continent. On this he builds an argument for the original unity of what he calls the *Ganowanian* or "Bow and Arrow" race. This term, which he has taken from the Seneca (Iroquois) tongue, he proposes as the best generic or collective name of the native Americans, just as the Indo-Europeans are called *Aryans*, that is *Aryas* or *Ploughers*, and others *Turanians*, from *Tur*, that is, the "Horsemen" of Central Asia.—*Smithsonian Contributions to Knowledge*, vol. xvii.

selves long, but, as a rule, small, black, and deep-set, with corner directed upwards towards the temple; cheek-bone strong and projecting, with a marked inclination towards the under-jaw; jaws themselves long and prominent, with large teeth; nose also large and somewhat curved and even aquiline; skin soft as satin to the touch, in colour changing from a dirty yellow to an olive brown and copper—or, better, *cinnamon*—hue. None, however, of the South American races have the true coppery or cinnamon shade of the North Americans, and even amongst them it is really characteristic of the Iroquois and Algonquin stocks alone. Indeed, no physical feature varies so much as this of colour. Thus we have on the one hand the Guaicuri and Pericui of Lower California, almost of as deep a hue as the Negro (La Perouse), and the Charruas of Uruguay, "almost black" (L. H. Morgan), and on the other the Queen Charlotte Islanders and Hydahs, generally spoken of as remarkably fair. Captain Dixon describes a Hydah female, "whose countenance had all the cheerful glow of an English milkmaid, and the healthy red which flushed her cheek was even beautifully contrasted with the whiteness of her neck; her forehead was so remarkably clear that the translucent veins were seen meandering even in the minutest branches." The Pammas also, of the Madeira, in Brazil, are stated to be almost white.

But the great variety in complexion is balanced by absolute uniformity in the character of the hair, which is always long, straight, coarse, black, and lustreless, in shape cylindrical or cylindroidal, never oval or ovoidal as that of the European. This cylindrical form is the true cause of its lank appearance, for, if flattened by pressure to an oval shape, it curls, and we otherwise know that all hair which curls must be oval. In old age it becomes, not grey, but simply colourless, variously described of an "ashy white" and "silver white." The hair, also, of the ancient races, recovered from the Temple of the Sun in Peru, from Mexico, and Brazil is always cylindrical, straight, and lank, so far implying that they were of the same species as the present indigenous inhabitants of the western hemisphere. It may here be remarked that the Egyptian mummy hair is *oval*, affording one of the very strongest proofs that the pyramid-builders of the Nile valley had nothing in common with those of the Anahuac table-land.

Another somewhat general characteristic of the native Americans is their feeble constitution, which is little capable of resisting the ravages of epidemics, the effects of strong drinks, or even of mere change of diet and climate. The natives of the Labrador uplands, when tempted by the missionaries down to the coast, soon sicken and die. They cannot stand the moist sea air; they become liable to influenza, rheumatism, and consumption, and for most of them a journey to the shores of the Gulf of St. Lawrence is a journey to the grave. The Amazonian Indians also suffer severely from the slight change of temperature as they ascend the affluents of the Marañan to the high regions, or come down from the Brazilian uplands to the lower level of its valley. They are said even to be injuriously affected by a mere change of clothing, owing, doubtless, to the unwonted increase of temperature accompanying it.

4. *Mental Attributes.*

Their more striking mental qualities are, perhaps, resolution and earnestness on the one hand, and on the other indifference to bodily pain and to external nature—an indifference, however, often more assumed than real, because by no means due to a heavy or unsympathetic temperament. The Red man is, on the contrary, at heart exceedingly passionate, yielding with unexampled impetuosity to certain affections—such, for instance, as gambling and drink—once the appetite has been whetted for such tastes. Temptation he can then no more resist than can the beast of the field his animal impulses, and he will stake everything, even life itself, to gratify the predominant frenzy of the moment. Thus, we are told that even the sluggish Californian will undergo every hardship, travel any distance, and fight his way through a dozen hostile tribes, in order to procure from the New Almaden quicksilver mine the red cinnabar wherewith to decorate or bedaub his person. Hence this outward or seeming indifference to physical pain, and to the external aspects of nature flows rather from a settled determination to conceal his inward feelings—a determination schooled in the individual by a life of the severest training—in the race developed to a second nature by the accumulating influences of successive generations.

The Redskin is, on the whole, not deficient in personal bravery, a quality for which some nations, such as the Iroquois, and Algonquins of the eastern seaboard, the Dacotahs and Pawnees of the prairies, the Jibaros of the Napo Valley, the Chilian Araucanians, and many others, are, indeed, conspicuous. But all are alike cruel and cunning in war, priding themselves more in circumventing the enemy than in overcoming him in open fight. Generosity they are also strangers to, and know nothing of the more ennobling passions and feelings of human nature. To them love in its higher sense conveys no meaning. Of the comic vein also, so conspicuous in the African race, there is almost a total absence. The feeble jokes the Redskin occasionally gives rise to are all on the side of the white man; he himself knows nothing of the "humour of the thing," and for him life has but one—the serious, we might almost say the tragic—side.[1]

Still the native American does not want parts, and he ranks somewhat high in the mental scale, higher certainly than the Australian, the Papûa, the Malay, or Negro races. It is, no doubt, quite true that many Californian, Amazonian, and other tribes cannot count beyond three or five; but others, again—such as the Choctaws, Cherokees, Dacotahs, Chippeways, Winnebagoes, and Wyandots—not to speak of the civilised Aztecs, Mayas, Quichés, and Quichuas—can reckon up to a million, three hundred million, and even a billion. The culture of these civilised nations was, as shown, both of native growth and of a much higher order than anything developed by the African Negroes, or borrowed by the Malays of Java from the Aryan Hindus. In the region of the Andes especially there seem to have been no less than five eras of human progress stretching back possibly thousands of years, and culminating with the glories of the Peruvian Incas. Typical of this last phase are the wonderful ruins of the Temple of the Sun at Cuzco, erected fully a hundred years before the arrival of the Spaniard, and executed with surprising accuracy. Many of the hard porphyry blocks used in this building are of huge proportions, and had to be conveyed for miles without

[1] The stereotyped stories of Indian wit current in popular works scarcely call for serious consideration. Few of them are really authentic, and even these are mostly coloured by writers who are nothing unless effective.

the aid of iron, or of any beast of burden stronger than the llama. It should be further observed that the low position elsewhere occupied by most of the native peoples—mere hunters and fishermen—was due rather to the peculiar configuration of the land and other adverse circumstances than to the limited mental endowments of the Red man. From this point of view, all the more wonderful becomes the relatively high degree of culture attained by the civilised races, without the aid of such helpmates as the larger domestic animals—the ox, the horse, or the camel, none of which are indigenous in the New World. The only useful plant which it possessed capable of comparing with the many cereals of the Eastern Hemisphere, was the so-called Indian corn, or zee maize, in connection with which it should be remembered that, when Jacques Cartier in 1535 visited the site of the present Montreal, he there found the "nation de l'Iroquet," the Onontchataronons of the neighbouring Hurons, a semi-civilised agricultural Algonquin tribe living in the strongly-fortified village of Hochelaga, and cultivating large fields of maize. This settled people unfortunately soon after disappeared, absorbed or destroyed by the Wyandots, and it must for ever remain matter of conjecture whether they were the last remnants of an agricultural race then dying out, or the pioneers of an agricultural era then being developed by the Algonquin nation, but nipped as it were in the bud by the appearance of the White man on the scene. But in any case the circumstance tends to show that, under more favourable conditions, the Red man might perhaps of himself have turned to a more settled life, and have thus risen higher in the social scale than he could ever hope to do as a fisher or huntsman.

5. *Are the Aborigines one or many?*

Coming now to the question of the unity or variety of the American race, it would appear from the foregoing remarks that, with the exception of the hair, there is no single physical or mental quality sufficiently uniform to supply an argument in favour of its common origin. We have seen that the more prominent characteristics, such as colour and intelligence as gauged by the arithmetical test, are often disturbed

by discrepancies that can be regarded as nothing short of fundamental. And these deviations from the normal type will at times occur even within the same family, or between tribes speaking dialects of the same stock language. Thus the Nasquapees, and the Montagnais of Labrador are usually regarded as branches of the great Kree nation, itself a branch of the Algonquin, and they certainly speak varieties of the Kree tongue so much alike that they are able to converse together without much difficulty. Yet H. Y. Hind, a most careful observer, assures us that "there is such a marked difference between the appearance of Nasquapees and Montagnais that, judging from their exterior, *one would suppose them to belong to different families of the human race.*"—(*The Labrador Peninsula*, i. p. 332.) Here, therefore, unity of speech is of itself insufficient to establish unity of origin. How then can such a common origin be predicated of tribes living thousands of miles apart, differing profoundly in their physical and mental qualities, and speaking languages diverging as much as it is possible to suppose any idioms capable of diverging from each other? And even those who claim an Asiatic origin for the American race will scarcely deny that what happened once could in the course of ages happen again and again. Hence, if there was one, there may have been several Asiatic migrations, in which case the American Indians would still be descended, not of one, but of several independent stocks.

6. *Language—Polysynthesis.*

But the question is much too far-reaching to be more than alluded to here. Meantime the doubts that these few remarks may tend to throw upon the generally accepted theory of the unity of the aborigines will help partly to account for the prodigious number and diversity of their languages. All these countless idioms, however, notwithstanding their profound discrepancies, have still one salient feature common to all of them, and common to them alone. As above stated, they are all cast in one mould, thus differing in substance while one in form. They belong to what is called the polysynthetic order of speech, an order which is elsewhere unrepresented, except

perhaps in a feeble way by the Basque of the western Pyrenees. The languages of the Old World, taken in its widest sense so as to include Polynesia and Australia, conform to one or other of the three orders known as the Monosyllabic, Agglutinating, and Inflectional. These orders are unknown in the Western Hemisphere, where, always excepting the Otomi of Central Mexico and perhaps the extinct Attacapac of Louisiana, polysynthesis reigns supreme.

A clear understanding of the meaning of this term will go a long way towards accounting for the astounding number of the American languages. No one can have chanced to open Eliot's Massachusetts Bible, or any other work in any of these idioms, without being struck by one remarkable feature. They seem made up to a very large extent of tremendously long words. This is owing to their peculiar structure, to characterise which many terms have been proposed—amalgamation, incorporation, holophrasis, and lastly polysynthesis, which was originally suggested by Du Ponceau in 1819, and seems still to meet with most favour. This word, literally meaning *much composition*—that is, the putting together or fusion of many words into one—expresses the process with sufficient accuracy for ordinary purposes. It implies in a general way that these languages combine in a single word, a "bunch-word" as it is called, complex conceptions, in other systems expressed by two or more separate terms. These words are then said to be "incapsulated," like a set of boxes one within the other. To the process itself there is practically no limit, so that the subject and predicate of the Aryan tongues, with their various indirect relations, tend to become amalgamated in one interminable polysyllable, regularly conjugated like any ordinary Greek or Latin verb. The consequence is that word and sentence often become convertible terms; or, it might be almost said that most of the words in these languages are not words at all, as we understand them, that is, simple expressions for simple ideas, but complete sentences in themselves. So true is this, that not unfrequently the names of such ordinary objects as *fish*, *tree*, *star*, are not simple roots incapable of further analysis, but compound terms reducible to a series of words descriptive of these objects, that is to say, they are sentences, or at least brief descriptions. Thus in Iowa *the*

beard is "the hair of the chin;" a *finger* is "the nose of the hand;" a toe is "the nose of the feet;" *silver* is "white iron;" and so on. So also the Algonquin *shominaubo* = wine, means literally "grape-berry liquor;"[1] *mishiminaubo* = cider = apple-berry liquor; *keeshkibŏjegum* = handsaw = "a sawdust making instrument;" plough = a breaking-up-land instrument, such examples clearly showing that these tongues have not yet forgotten their etymologies. The great bulk of the words still show their formation, that is to say, they have not yet passed out of the concrete state into the stage of pure abstraction and generalisation, in which the roots and formative elements not only become completely fused together, but the roots themselves lose their independence, or their origin becomes obscured, which amounts to the same thing. Thus we see that the American bunch-words are essentially concrete, all the components being roots expressive of material objects, the full derivation of which is always present to the mind of the speaker.

The foregoing remarks will explain how it is that American dictionaries are crowded with conglomerations of syllables called words, but which are really complete sentences. Thus the Krēe dictionary of the Rev. E. A. Watkins contains such terms as: yikwakoonāwāo = he covers him over with snow; poostuspuistakunāo = she puts on an apron; kātuspichikwunāwināo = she takes off her apron; and so on. The fact is, the Indian can scarcely use even concrete terms apart from their associations; he cannot say *to cover*, *to put on*, *to take off*, but only *to-cover-with-snow*, *to-put-on-an-apron*, *to-take-off-an-apron*, or rather somebody-covers-somebody (or something) with-snow, with-earth, etc. Hence nothing puzzles him more than to be asked to give the equivalents in his language of isolated English words. He cannot translate *to eat*, *to drink*, *to strike*, because he never eats, drinks, or strikes, but always eats something, drinks something, strikes somebody, in diverse and sundry ways, and looking on all this as a single concrete conception, naturally expresses it in a single concrete term. The result of course is that this concrete term must be conjugated, and that conjugation itself becomes interminable. The Latin

[1] In Iroquois also *wine* = oneharadeschoengtseragherie = "a liquor made of the juice of the grape," a still more complete definition.

verb *amo* is exhausted when it has been run through its several moods, tenses, persons, and voices; but the corresponding Chippeway verb *waub* is never exhausted, because a fresh conjugation arises, so to say, with every fresh coalescing object, and with every fresh accident of time, place, manner, and other extensions of subject and predicate. Hence we are no longer surprised to be told that "to conjugate the verbs to love, to see, to burn, through all the inflexions of which they are susceptible would be a work of years."—(Rev. Thomas Harlbust, Memoir on the Chippewa Tongue, in *Schoolcraft*, iv. p. 390.) Nor are we astonished to learn from another writer that in Mikmak even the very numerals are subject to conjugation, that is to say, cannot be used apart, but must be incorporated and conjugated, as from *naiookt* = one, we get:

Naiooktaich = there is one.
Naiooktaichcus = there was one.
Encoodaichdedou = there will be one, etc.

7. *Consequences of Polysynthesis—Syncope—Letter-change—Evanescence.*

Such seems to be the *rationale* of polysynthesis; but the process leads necessarily to other results, the most striking of which is perhaps the tendency to contractions and abbreviations of all sorts. Were the roots strung together, as in the Sanskrit or Teutonic method of word-building, without considerable clippings and curtailments, they would result in words far too long for utterance even by those "to the manner born." As it is, and in spite of all the syncope to which they are subjected, words in these languages even for the most ordinary objects are often of amazing length. Thus in Aztec a kind of bread is called totanquitlaxcallillaquelpacolli. More complicate notions are, of course, still longer, as, for instance, the Sahaptin ipinashapatawtrahlikitamawarsha = he keeps one long waiting for him at night; the Kree Kaookiskinnhohumowakunimimittukook = I shall have you for my disciples; and the Cherokee winitawtigeginaliskawlungtanawnelitisesh = by that time they will have nearly ceased favouring thee and me from afar. Hence the unavoidable necessity of shortening the components by every imaginable expedient, and to an extent of which

it is difficult for us to form any adequate conception. Thus in Aht (Vancouver's Island) the phrase "I do not understand" is expressed by the amalgam *wimmutomah*, made up of *wik* = not, kumotop = to understand, and *mah* = I, so that *wimmutomah* is really a contracted form of *wikkumotopumah*. Here the *k* of *wik* has become *m* by affinity, the initial *ku* and final *p* of *kumotop* disappear, while the *o* of the second syllable is modified to *u*; consequently in this instance, which is by no means an extreme case, the result is brought about partly by syncope and partly by euphonic interchange of vowels and consonants.

This interchange of letters is of far wider range than one is prepared for by a study of Grimm's law of *lautverschiebung*, or "sound shifting," as applied to the Aryan tongues. It is of course occasioned by the same urgent need for abbreviation, and is so universal as to form a prominent feature in all polysynthetic languages. In the Nitinaht dialect of the above-mentioned Aht idiom *b* and *d* are uniformly substituted for *m* and *n*, as in *boouch* for *moouch* = deer; *dissibach* for *nismah* = country.

Lastly, some idioms have a tendency to carry the principle of contraction to an almost unlimited extent, as for instance, the same Nitinaht dialect, which by interchange and syncope combined reduces the full Aht term *noowayksoh* to *dooux* = father, and *oomayksoh* to *abahx* = mother.

We can now readily understand how the process leads inevitably to another characteristic, which may perhaps be best expressed by the word *evanescence*. These languages tend to diverge rapidly from each other, their morphology or grammatical mechanism living on, while their substance, owing to the obscuration of their roots, as above illustrated, is continually shifting, and soon loses its identity altogether. It thus often becomes impossible to detect the affinity of idioms which may yet be closely related. The Nitinahts, if removed from the vicinity of the other Aht-speaking tribes on the west coast of Vancouver, would probably in a few generations develop their peculiar dialect into a language as distinct and apparently as independent of the common tribal tongue as English is of Hebrew or Japanese. Their idiom would, at all events, in a single generation diverge more from the parent stock than English has diverged from the organic Aryan

speech in the course of many thousand years. The Nitinaht forms *dooux* and *abahx*, for instance, differ far more widely from the neighbouring Aht *noowayksoh* and *oomayksoh* than do the English *father* and *mother* from the Sanskrit *pitr*, *mâtr*, although these two languages represent the very opposite extremities of the Aryan system.

8. *Vast number of the American Languages accounted for.*

The prodigious number of seemingly independent idioms spoken by the few millions of American Indians will now perhaps cease to cause much further amazement. And when it is added that the long compound terms, of which they are largely made up, are not the result of slow processes of phonetic decay, but are often in fact instantaneous formations, we shall perhaps begin rather to wonder that they are not even still more numerous than careful investigation shows them to be. If, for instance, an association of City capitalists were able suddenly to advertise themselves as the "Robritiralifisuranompany," and every one should at once, and, as it were, intuitively understand this to be the polysynthetic form of "Royal British Fire and Life Insurance Company," we may easily fancy what would become of the English language in a few generations, especially if further left to itself, and unprotected by the conservative influence of a written literature. Yet compounds of this sort have actually been formed by English-speaking communities in America, as, for instance, the word *Penyan*, a Pennsylvanian Yankee, where *Pen* stands for Pennsylvania, and *yan* for Yankee. The principle has also been illustrated by the bill of an illiterate English horse jobber, which was worded :—

Anosafada = A horse half a day—so much.
Takinonimome = Taking on him home—so much.

But perhaps a more perfect instance of English polysynthesis is the familiar expression hap'orth = halfpenny-worth, where the word *penny* is represented by the single letter *p*, as is so often the case in the American tongues.

The little attention given to polysynthesis, even by professed philologists, will be sufficient excuse for the space here devoted to the subject. Some have recently even questioned

its claim to be regarded as a distinct order of speech, asserting that it is merely another name for agglutination, and that the morphology of the American languages does not differ materially from that of other agglutinating tongues, such, for instance, as those of the Finno-Tataric, Dravidian, Bantu, or Woloff groups. But a more careful study of the true nature of polysynthesis must show that this view is utterly untenable. It was above remarked that in this process not only are words often virtually so many sentences, but that the sentences themselves, or what in other systems would be sentences, are here frequently nothing but words. Not merely are certain direct and indirect pronominal objects blended with the verb, as in Turkish, Magyar, and especially Basque; but the process of blending, or "incapsulating," is extended indefinitely, embracing the direct and indirect nominal subjects and objects, together with their various adjectival and adverbial extensions. Moreover, in the so-called "Turanian" idioms the leading roots are *never obscured, or even modified;* whereas in the American, all the roots, as above shown, are clipped and cut to such an extent that nothing often is left of them except a single letter, and this of itself alone constitutes an essential difference between the agglutinating and polysynthetic systems. In the one words are merely united together, like oil and vinegar; in the other, they are fused together, like wine and water.

It may also be noticed that many American families, such as the Kree and the Iroquois, confuse noun and verb, or rather recognise the noun alone, which, when blended with its various affixes, thus corresponds to our verbal expressions. Hence the sentence is not based on the relation of the subject to its predicate, but rather on that of the object to its various bearings and connections. The form of the sentence is in fact regulated, not by a verbal, but by a substantival relation—that of the object or thing affected. Such a manner of clothing the conceptions could not fail to influence in its turn the development of thought. Not only our ideas and views, but our whole method of thinking, the very current of our thoughts, must appear to the native American to the last degree strange and perverted. Hence our languages are instruments of which he is unable to make any adequate

use, and in which he finds it almost impossible to clothe his conceptions with ease or propriety. Polysynthesis, in a word, is, both outwardly and inwardly, radically distinct from all other forms of speech. It constitutes an order apart, which, like the agglutinating, has grown out of the isolating, but which, unlike it, seems incapable of developing into the higher or inflectional state. One reason of this undoubtedly is, because the community itself is not progressive, but stationary. Hence its speech, after developing from the monosyllabic stage, as all speech must necessarily have done, revolves, so to say, in a vicious circle of polysynthesis, apparently unable to pass on to the more perfect inflecting state, as the speech of the progressive Aryans has done.

9. *Their Classification.*

This is at the same time the very best explanation that can perhaps be given of the fact that the American languages, and they alone, unless an exception be made in favour of Basque, are cast in this uniform polysynthetic groove. It is a fact that must otherwise be accepted, just as, pending the results of further research, we must accept that other fact, probably intimately bound up with it—the independence of the American race itself of all other races of mankind. At the time of the discovery of the New World this race, whether one or many, was already found diffused over the whole continent, from the Frozen Ocean to the Land of Fire. Since then many tribes and nations, and with them many tongues and families of speech, have passed away, leaving no trace behind them. But there still remains a multiplicity of tribes, speaking a vast number of idioms, so numerous and so varied as to have hitherto baffled all efforts at complete classification. In the Old World the only parallel to this are the Negro languages of Central Africa. Elsewhere, both in Africa and throughout the Eastern Hemisphere, the actual number of stock languages —that is, of independent groups—has at least been approximately ascertained. But in America this is so far from being the case, that the very latest schemes—such, for instance, as that of Fredrich Müller—present strange anomalies and seemingly irreconcilable inconsistencies.

The subjoined classification must not, therefore, be taken as final, or, indeed, as anything more than, perhaps, a slight improvement on previous attempts. In the alphabetical list following it will be found the names of all important existing and historical tribes, with as much information concerning them as was consistent with a due regard to our limited space. The list is certainly not exhaustive, but when it is stated that it contains about 1700 names, or 600 more than in the index to H. E. Ludewig's *Literature of the American Languages*, we may perhaps feel somewhat confident that there are not very many serious omissions. When, in the course of his reading, the intelligent student meets with the name of an Indian tribe, what he naturally likes to know about it is, to what family or stock does it belong? If historical, where originally settled? Does it still exist? If so, where now located? The object of this alphabetical list has been to supply in a convenient form information of this sort, which has hitherto remained scattered over a multiplicity of works mostly inaccessible to the general public. The whole subject will be found further illustrated in the accompanying philological and ethnographical maps, forming companions to that prepared for the monograph on African ethnology in the first volume of this series.

NOTE.—The geographical position of all the tribes mentioned in the following series of schemes will be found accurately fixed in the general alphabetical index, an arrangement by which much confusion is avoided, and the tables themselves kept clear of overcrowding.

General Scheme of American Races and Languages.

- **I. Sub-Arctic Races.**
  - Eskimos
    - Karalits.
    - Eskimos proper.
    - Innuits.
    - Koniagas.
  - Aleuts.
  - Thlinkeets (Koloshes).
- **II.** Athabascan, or Tinney family.
- **III.** Algonquin family.
- **IV.** Wyandot-Iroquois family.
- **V.** Dacotah family.
- **VI. Appalachian Races.**
  - Muscogee group.
  - Cherokees.
  - Catawbas, with Woccons.
  - Natchez, with Utchees.
- **VII. Columbian Races.**
  - Hydahs and Nootkas.
  - Puget Sound group.
  - Chinooks and Shushwaps.
  - Salish and Sahaptins.
- **VIII. Californian Races.**
  - Klamath family.
  - Central Californians.
  - Lower Californians
    - Cochimí.
    - Guaicuri.
    - Pericui.
- **IX.** Shoshone and Pawnee families.
- **X. New Mexican and Arizona Races.**
  - Pueblos nations.
  - Yumas family.
  - Chevet, Benemé, and other independent Arizona languages.
- **XI. Mexican Races.**
  - Aztec-Sonora group.
  - Miztec.
  - Zapotec.
  - Tarasco.
  - Matlaltzinca.
  - Totonac.
  - Otomi.
  - Zacatec, etc.
- **XII. Central American Races.**
  - Maya-Quiché family.
  - Lenca family.
  - Isthmians
    - Dorichos.
    - Savaneric.
    - Manzanillo.
    - Cholo.
    - Bayano.
- **XIII. Orinoco Races.**
  - Carib family.
  - Barré family.
  - Chibcha or Muisca.
  - Salivi-Betoi family.
- **XIV. Amazon Races.**
  - Mandrucus.
  - Jivaros.
  - Zapáros.
  - Orejones, etc.
- **XV. Peruvian and Bolivian Races.**
  - Quichua-Aymara family.
  - Mocobi family.
  - Vilela-Lule family.
  - Moxos, Chiquito, Chaco — Nations unclassified.
- **XVI. Brazilian Races.**
  - Guarani family.
  - Ge or Gez family.
  - Payagua-Guaycuru family
  - Purys family.
  - Kiriri, Botocudos — And others unclassified.
- **XVII. Patagono-Chilian Races.**
  - Araucanians.
  - Puelches.
  - Tehuelches.
  - Fuegians.

I. Sub-Arctic Races.

As seen in the general scheme, these branch off into three main divisions, showing certain mutual affinities, insufficient, however, to establish community of origin either in speech or descent. Even the Koniaga, or Eskimo of the Kadiak islanders, Buschmann pronounces, after a careful study, to be entirely distinct from the neighbouring Aleut, notwithstanding the received opinion to the contrary.[1] The Eskimo itself H. H. Bancroft refuses to recognise as an American language at all, connecting it with certain Asiatic forms of speech. No doubt the Namollos, or sedentary Chuckchis on the Gulf of Anadyr, speak Eskimo dialects, and this language has been traced as far west in Asia as the mouth of the Kolyma river. Nevertheless its structure is not merely agglutinating, like the Uralo-Altaïc or Dravidian, but strictly polysynthetic, like all other American tongues. It piles up words to an extent unapproached even by the Basque, as, for instance, in the Greenland dialect:—

Aglekpok = he writes.
Aglegiartorpok = he goes to write there.
Aglegiartorasuarpok = he goes quickly to write there.
Aglegkigiartorasuarpok = he goes quickly to write there again.
Aglegkigiartorasuarniarpok = he goes there quickly and tries again to write—

until we at last get words of nineteen or twenty syllables, such as sanigiksiniariartokasuaromaryotittogog. Hence the Innuit dialects spoken in Asia imply rather an Eskimo migration westwards than an Asiatic migration eastwards.

This race is spread from about Mount St. Elias round the shores of Alaska and the Arctic Ocean, down both sides of Baffin Bay and Davis Strait, and along the Labrador coast southwards to the Gulf of St. Lawrence, but reaching nowhere inland more than 150 miles. It is divided into three distinct branches, as thus:—

[1] His expression is: "Ein eigener von dem eskimoischen *ganz verschiedener* Sprachtypus."—*Spuren der Aztec, etc.*

- I. Eastern Branch
  - Karalits or Kalalits. (Greenlanders).
    - Southern tribes at Julianeshaab.
    - Central tribes at Disco.
    - Northern tribes at Upenavik or Humâk.
  - Eskimos Proper of Labrador and the Moravian Missions.

II. Northern Branch, from Hudson Strait to the Coppermine; tribal names unknown.

- III. Western Branch
  - Innuits "People."
    - Naggeuktormutes.[1]
    - Kitegarutes.
    - Kangruali Innuits.
    - Mewungmutes.
    - Nunatangmutes.

    } From the Coppermine to Kotzebue Sound.
  - Koniagas or Kadiaks.
    - Chugatshes.
    - Aglegmutes.
    - Keyataigmutes.
    - Agalmutes.
    - Kuskoquigmutes.
    - Magemutes.
    - Kwichpagmutes.
    - Pashtoliks.
    - Arlygmutes.
    - Malemutes and Kaviaks.

    } From Kotzebue Sound across the Alaskan Peninsula to Mount St. Elias.

The Aleuts, who call themselves *Kagatâ'ya Koung'ns*, men of the east, are wrongly regarded by most writers as Eskimos, the two languages being entirely different. They consist of two tribes—the

Unalaskans, on the mainland and in the Fox and Shumagin Islands.

Akkhas, in the rest of the Aleutian archipelago.

The Thlinkeets, that is "men," are also known by the Aleut term *Kolosh*, or more properly *Kaluga*, dish, from the resemblance of their lip ornament to the wooden vessels of the Aleutian islanders. Some writers extend their boundary to the Columbia river, including under this heading all the Stikine, British Columbian, Washington, and Oregon nations. Others again regard them as Eskimos, and, all things considered, they may be looked on as a sort of connecting link

[1] The ending *mute*, *mut*, or *meut*, means village, and is added to the tribal name.

between the Innuit and the Red man proper. The Thlinkeet domain stretches along the Pacific seaboard from about Mount St. Elias, where we left the Eskimos, southwards to the river Nass. The principal tribes, taking them in order from north to south, are the *Ugalenzes*, *Yakutats*, *Chilkats*, *Hoodnids*, *Hoodsinoos*, *Takoos*, *Auks*, *Kakas*, *Stikines*, *Eelikn*âs, *Tungass*, and the *Sitkas*, who are the chief tribe in Sitka and neighbouring islands.

The Thlinkeet language is exceedingly harsh and uncouth, more so perhaps than any other native American idiom, the Chinook alone excepted.

II. Athabascan or Tinney Family.

The first of these collective terms is purely geographical, being taken from Lake Athabasca, which lies at about the centre of this widely diffused family. The second, variously written Tinney, Tinneh, Tinné, Dinné, Diné, Dinneh, etc., means "people," and is the name by which they generally call themselves. Though not very numerous, they are spread over a larger area than any other native race, the Algonquins and the Tupi-Guàrani perhaps alone excepted. They occupy nearly the whole of British North America, from the Churchill northwards to the Frozen Ocean, including the greater part of Alaska and Stikine, or New Caledonia, besides large tracts in New Mexico, Arizona, Colorado, North Mexico, and Oregon. From the subjoined scheme it will be seen that the Apache or southernmost offshoot is separated by an immense distance and by innumerable intervening tribes from the main stock. The great divisions of the Tinney family are the

1. KENAIS.	2. KUTCHINS.	3. CHIPEWYANS.	4. TACULLIES. (*Carriers.*)	5. APACHES.
Ingalits.	Loucheux.	Tantsawhoots.	Taltotin.	Shis Inday (Apaches proper).
Koltshanes.	Vanta Kutchin.	Beavers (Copper).	Chilcotin.	Chiricaguis
Kenais proper.		Horn Mountain.	Nascotin.	Coyoteros.
Atnahs or Nehannes.	Natche Kutchin.	Strong-bows.	Thetliotin.	Garoteros.
		Thlingcha.	Tsatsnotin.	Faraones.
Ugalenz.	Yukuth Kutchin.	Dogribs (Slavés).	Tatshiautin.	Gileños.
Jugelnuts.		Kawcho (Hares).	Nulaautin.	Lipans.
Junakachotonas.	Tatchone Kutchin.	Red Knives.	Ntshaautin.	Llaneros.
		Ambawtawhoot (Sheep).	Natliautin.	Mescaleros.
	Han Kutchin.		Nikozliautin.	Mimbreños.
	Kutcha Kutchin.	Sarsis.	Babine.	Natages.
		Tsillawdawhoot (Brushwood).	Sikennies.	Pelones.
	Gens de Boulleau.			Fejuas.
		Slouacuss.		Pinaleños.
	Gens de Milieu.	Edchawtawoots.		Tontos.
		Sawessaw Tinney (Chipewyans proper).		Jicarilleros.
	Tathzey; Artez.			Vaqueros.
	Nuclukayettes.			Tenuai. (Navajos).
	Newicarguts.			

1. KENAI, also Kinai, Thnaina and Tnai, is merely another form of Tinney = men, which, as stated, is the most common appellative of all these peoples. The Kenais are wrongly treated as an independent race by Frederick Müller and others, as they are undoubtedly a branch of the Tinney stock. They occupy the interior of Alaska from the Lower Yucon to the Copper River.

2. The KUTCHINS, extending from the Upper Yucon eastwards to the Mackenzie, are by some writers called *Loucheux*, "quarrellers," or "squinters," as it is variously explained. But this nickname properly applies only to the Kutchins west of the Mackenzie.

3. The CHIPEWYANS are generally regarded as the typical branch of the Tinney family. They occupy the region between the Rocky Mountains and Hudson Bay, reaching southwards to the Churchill and the Methy Portage, where they confine on the great Algonquin family. Chipewyan is sometimes used as the collective term for the whole race, but improperly, as it is a Kree word, simply meaning "pointed coat." On the other hand, it is confounded by Dr. R. Brown and other popular

writers with *Chippeway*, the name of a nation belonging to the Algonquin, a totally different stock. The Chipewyans proper are the *Sawessaw-Tinney* of Lake Athabasca, some hundreds of miles from the Chippeways of the Canadian lake region.

4. The TACULLIES are the *Nagailers* of Mackenzie, and the *Carriers* of the Canadian fur-traders. They occupy the greater part of New Caledonia, and with them are sometimes grouped the Nehannes or Yellow Knives, who are really a branch of the Kenais. These Nehannes are the Atnahs or Ah-tenas of the Russians, a term which has received undue prominence on English maps copying blindly from foreign sources. It should be confined to the river Atnah and the Kenai tribes on its banks.

5. The APACHE, or southernmost group of this family, occupies a region that cannot be definitely settled, as most of the Apaches are fierce nomad tribes, roaming over the country between the Colorado Desert and the Rio Pecos on the east, and from Utah as far south as Texas, Chihuahua, and Sonora. Their real collective name is *Shis Inday*, or "men of the woods," the word *Inday* being again identical with *Tinney*, as is also *Tenuai*, the tribal name of the Navajos of the Sierra de los Mimbres. Like all the Athabascan languages, the Apache is distinguished by its harsh guttural sounds. Bartlett, quoted by H. H. Bancroft (iii. 596), describes it as "a combination of Polish, Chinese, Choctaw, and Dutch. Grunts and gutturals abound, and there is a strong resemblance to the Hottentot click. Now blend these together, and as you utter the word, swallow it, and the sound will be a fair specimen of an Apache word."

To the Tinney stock belong also the UMPQUAS, on the *Umpqua* in Oregon; the TLASKANAI of the Lower Columbia, and the Californian HOOPAH, including the *Lessics*, *Wilacki*, *Haynaggi*, *Tolewah*, *Siah*, and *Tahahteen*.

Pawnee also has been connected by Vater and others with Apache, but on insufficient grounds.

III. ALGONQUIN FAMILY.

While very nearly, if not quite as extensive as the Tinney, the Algonquin domain is more compact, no members of this great

and historical family being entirely severed by intervening alien tribes from their kinsmen. They extended originally from the Churchill southwards to North Carolina (the Pamticos), across twenty degrees of latitude, and from the Atlantic coast of Labrador westwards to the Rocky Mountains, or from the 45° to the 115° W. longitude. The generic term *Algomequin*, contracted to *Algonquin*, was first used by the French, and, though purely conventional, is very convenient. It means nothing more than "the people of the other side," that is, in contradistinction to the Iroquois, who occupied the south side of the Upper St. Lawrence. Hence we see that there is really no one Algonquin tribe, properly so called, on which account the word is all the more available as a collective term.

A satisfactory classification of the Algonquin nations, owing to their continual migrations in historic times, is a matter of extreme difficulty, and the subjoined scheme is proposed with some hesitation, as the result of not a little reflection. One of Mr. Schoolcraft's contributors thinks that the Algonquin mother tongue was propagated with the migration of the tribes from the south-west to Virginia and Pennsylvania, thence trending northwards to Labrador and the Churchill. Another branch may have penetrated westwards to the Mississippi, descending that river to the Ohio to a point whence they had originally migrated into Virginia, thus completing the circuit of the whole area in historical times occupied by this race. The parent language he divides into five branches; 1. *Powhattan*, including all the Virginia dialects; 2. *Abenaki*, including the New England, New Brunswick, and Nova Scotia dialects; 3. *Nipercinean*, including the Chippeway, Montagnais, Kree, etc.; 4. *Lennape*, including the numerous Delaware dialects; 5. *Illinois*, including the Miamis, Weas, and Piankishaws, the Sacs and Foxes, the Kaskasias, Piorias, and Kickapoos, the Shawnees, Munsees, Stockbridges, Cheyennes, Arrapahoes, and many other outlying and more diverging idioms. But the genesis of the languages in the third, and especially in the fifth of these groups, is far from being yet determined, while no room is made in this arrangement for the Blackfeet, Ahahnelin, and others. The fact is it is premature to attempt a purely philological classification, and the grouping here submitted is accordingly based mainly on the geographical distribution of the tribes:—

Northern Branch.

- Labrador and Lower Canada.
  - Nasquapees.
  - Montagnais.
  - Sheshatapoosh.
  - Scoffies.
  - Mistassini.
  - Onmamiwek.
  - Bersiamite.
  - Papinachiois.
  - Ochestgootch.
  - Ochesigiriniooek.
  - *Chiscdeck.*
  - Tadousac.
- Algonquins proper.
  - Nepesangs.
  - Chippeways.
  - Ottowas.
  - Mississaugies.
  - Maskigos.
  - Kebiks.
  - Mukkundwas.
  - Musconongs.
- Krees.
  - Nehethawas.
  - Monsonics.
  - Nenawelliks.
  - Abbitibbes.
  - Attikamegs.

Eastern Branch.

- N. Scotia, N. Brunwk.
  - Abenakis.
  - Wawenocs.
  - Mikmaks.
  - Tarratines.
  - Etchemins ?
- Maine, New Hampshire.
  - Penobscots.
  - Penacooks.
  - Nipmucks.
  - Passamaquoddies.
  - Amariscoggins.
- *Wachusetts.*
- Winnepesaukies.
- Winnecowetts.
- Mass. Connecticut.
  - Mohicans.
  - Natics.
  - Narragansets.
  - Pequods.
  - Cawasumsenks.
- N. York, N. Jersey.
  - Adirondaks.
  - Sankikani.
  - Manhattans.
  - Unshagogs.
  - Shinicooks.
  - Metoacs.
  - Maquas.

Southern Branch.

- Delaware, Pa.
  - Leni-Lennappe.
  - Wanami.
  - Wunalachtigo.
  - Minsis.
- Virginia and N. Carolina.
  - Powhattans.
  - Chichahomies.
  - Mattaponies.
  - Accomacs.
  - Gingaskins.
  - *Pamunkies.*
  - Nanticokes.
  - Rappahannocks.
  - Panticoes.
- Pa. Ohio. Kentucky.
  - Shawnees.
  - Piquas.
  - Mequachake.
  - Kikkapoos.
  - Chillicothe.
  - Miscotins.

Western Branch.

- Illinois, Wisconsin, Michigan.
  - Illinois.
  - Weas.
  - Menomenies.
  - Miamis.
  - Pottawattamies.
  - Piankishaws.
  - Cohoquinas.
  - Kaskasias.
  - Mitchigamies.
  - Temorias.
  - Peorias.
- Minnesota, the Prairies, Saskatchewan.
  - Sacs.
  - Foxes.
  - Cheyenees.
  - Arapahoes.
  - Ahahnelins.
  - Blackfeet.
  - Blood.
  - Piegans.

Here the tribes are grouped chiefly according to their historical rather than their present geographical position, the latter being given in the general index. The classification of those of the last group of the fourth column has given ethnologists much trouble. The Sacs and Foxes, however, have long been recognised as of Algonquin stock, while the Cheyennes and Arapahoes, though often still classed with the Dacotahs, are in no way related to them, but in their speech, especially the pronominal element, show a certain affinity to the Algonquins. The Ahahnelins also (Gros Ventres of the Prairies) now mainly on the Milk River, would seem to be a branch of the Arapahoes (L. H. Morgan). Lastly, the Blackfeet, with the kindred Blood and Piegans, between the forks of the Saskatchewan and reaching southwards to the Missouri, are regarded by Albert Gallatin as of Algonquin blood, though this point is not yet perhaps definitely settled.

In the second column the Etchemins or Milicetes are entered as doubtful. They are almost universally regarded as Algonquins, yet a writer in Schoolcraft states positively that they are undoubtedly Hurons or Iroquois. In one place H. E. Ludewig calls them Hurons, yet in another says they are akin to the Souriquois, or Mikmak Algonquins. They are the "Etchemons," met by Champlain when he entered the St. John River, New Brunswick, on St. John's day 1604, and if really Hurons, then they are the only tribe of that race that has reached any point on the Atlantic seaboard.

The Algonquin languages, especially the Kree, Chippeway or Ojibway, and New England branches, have been longer and more carefully studied than any other American idioms, and one of them, the Natic or Massachusetts, though now extinct, possesses in Eliot's wonderful translation of the Bible the noblest monument of which any native tongue can boast.

IV. Wyandot-Iroquois Family.

Of this family there are three great branches—the Iroquois proper, mainly of New York; the Hurons or Wyandots on the northern shores of Lakes Huron, Erie, and Ontario; and the Monacans of the Virginian uplands. They thus occupied the eastern base of the Appalachian range down to the falls of the principal streams flowing into the Atlantic, stretching as far

south as North Carolina, and northwards to the present province of Ontario. But, with the doubtful exception of the Etchemins, they nowhere reached the Atlantic coast, being enclosed on every side by tribes of the Algonquin stock. Yet, owing to their admirable political organisation, the Iroquois branch were able not only to hold their ground but to make head against the surrounding Algonquin nations. The famous league known to French writers as that of the Iroquois, to the English as that of the Five, latter on the Six Nations, and to themselves as Ongwehonwe or "Superior Men," dates from the fifteenth century, and consisted of the *Mohawks*, founders of the confederacy, the *Oneidas*, *Onondagoes*, *Senecas*, *Cayugas*, all of New York, and the Tuscaroras, who joined in 1712 from North Carolina, making the sixth nation, though the league was known as the Six Nations long before this date. Other tribes, mostly Algonquin, belonging to the confederacy, though not enjoying equal rights with the rest, were the *Necariages*, adopted in 1723, the Mississaugies (1746), the *Shawnees*, called "brothers" by them, the *Tutelos* from Virginia, the *Canoys*, *Mohicans*, and *Nanticokes* or Stockbridges.

All the strictly Wyandot-Iroquois nations group themselves naturally into three branches as under:—

Canadian Branch.	Central Branch.	Virginian Branch.
Wyandots or Hurons.	*Iroquois proper.*	*Monahoacs or Monacans.*
Attignawattans.	Mohawks.	Nottoways.
Attigneenonguahacs.	Oneidas.	Tutelos (Meherries).
Arendahronons.	Onondagos.	Mynckussars (of Delaware).
Eries.	Senecas.	Tuscaroras (of North Carolina).
Attiwandaronk (the Neutral Nation).	Cayugas.	
	Two Mountain (Mohawks and Oneidas).	
	Susquehannocks (Andastes).	
	Cochenawagoes.	

All the languages of this family are highly polysynthetic, but in other respects often differ considerably from each other. Thus the Oneida, which is a well-marked variety, is remarkable for its softness and harmony, while the Seneca is very harsh, though rich and energetic. Of the Senecas, also Sinikers and Tsonontooas, there were eight sub-tribes, known by their totems as the wolf, bear, beaver, turtle, deer, heron, and

hawk. The interesting questions regarding the Eries and the lost Neutral Nation are alluded to under these entries in the general index. The Erie or Huron language differed greatly from the Iroquois; but like it rejects the labials *b* and *p*, and some other sounds familiar to European ears, often replacing them by others which to us seem exceedingly harsh.

V. Dacotah Family.

If L. H. Morgan's views were well founded, this family would be almost as widely diffused as the Algonquin, for in it he includes both the Iroquois and the Appalachian races. It would thus extend in a nearly uninterrupted line from Florida and the Alleghanies right across the States in a north-westerly direction as far as Montana and the southern fork of the Saskatchewan. But in any case it is very wide spread, comprising most of the nomad and settled tribes between the Middle and Upper Mississippi and the Rocky Mountains, and stretching from about the 37th parallel northwards to the Saskatchewan, here overlapping the Algonquin Krees.

Though very numerous, all the Dacotah (also Narcota and Sioux) tribes may be conveniently classed under three divisions, at least if we admit the claim of the Winnebagos to be regarded as the parent stock of the Omahas, Iowas, Osages, and other Missouri nations:—

Dacotah Branch.

- Isaunties.
  - Mediwanktons.
  - Walipekutes.
  - Wabipetons.
- Sissetons.
- Yantons.
- Tectons
  - Ogallalas.
  - Brulés.
  - Uncpappas.
  - Blackfoot Sioux.
  - Ohenonpas.
  - Itazipcoes.
  - Minikanyes.
  - Sans Arcs.
- Assiniboines (Hohas or Stone).
  - Manetopas.
  - Osseegahs.
  - Mantopanatos.

Winnebago Branch.

- Winnebagos (Puans).
- Punkas.
- Omahas.
- Missouris.
- Iowas.
- Otoes.
- Kaws or Kansas.
- Quappas or Arkansas.
- Osages or Wawsash
  - Beaver.
  - Black Dog.
  - Half Breed.
  - Big Chiefs.
  - Clamore.
  - White Hairs.
  - Big Hills.
  - Little.

Upper Missouri Branch.

- Upsarocas (Crows)
  - Kikastas.
  - Ahnahaways.
  - Allakaweahs.
- Minnetarees
  - Minnetarees proper.
  - Ehatsar (Gros Ventres).
  - Alesar. (Fall).
  - Kattanahaws.
  - Mandans.

The Dacotahs proper of the first column speak three well-marked dialects, all very harsh and full of gutturals and sibilants. These are the *Yankton*, on the Missouri, the *Isauntie* and *Teeton*, mainly on the Mississippi. Towards the beginning of the seventeenth century a number of tribes withdrew from the Dacotah confederacy, and were accordingly stigmatised by the rest as "Hohas," or Rebels, but are better known as the Assiniboine or *Stone Indians*, now dwelling between the Red River of the north and the Saskatchewan, mainly along the valley of the Assiniboine. Their Dacotah speech has become largely corrupted with Kree words and idioms. The nations of the third column, whose languages, especially the Mandan, diverge greatly from the Dacotah proper, are regarded by Morgan as a sort of connecting link between the Sioux and Florida or Appalachian family, which, as above remarked, he considers as a distant offshoot of the Dacotah stock.

Most of the Dacotah tribes still roam principally in the north, but many of them have lately either surrendered to the Federal Government, or crossed the border into British territory. The term Dacotah, of which Narcotah is merely a dialectic variety, means "allies," and should be properly applied only to the members of the Sioux Confederacy, comprising all the first column except the Assiniboines.

VI. Appalachian Races.

This division comprises all the tribes in the south-east corner of the Union, that is, those formerly occupying the region where are now the States of Arkansas, Mississippi, Louisiana, Alabama, Georgia, Florida, S. Carolina, and Tennessee. Here was the great nation of the Muscogulges or Muscogees, called also Creeks, from the many creeks or streams watering their country. They were the centre of a powerful confederacy, most of whose members were of kindred blood. The confederate nations were the

Muscogees proper, embracing the *Upper Creeks* of the Upper Alabama, and the *Lower Creeks* or

Seminoles, of the Lower Alabama and the Flint, both originally from beyond the Mississippi. The Seminoles were at one time the dominant race in Florida, where a few are still found, but the great

bulk are now settled in Seminole Reserve, Indian territory. They were the original stock of the Creek nation, but their speech now differs greatly from that of the Muscogees. The

CHOCTAWS of the Lower Mississippi, immortalised by Chateaubriand's *Atala*, and closely akin to the

CHICKASAWS, including the *Chakchi-oomas*, *Oofé-Ogooles*, *Tapoosas*, *Coroas*, and *Yazoos* of Mississippi, besides the *Conches* of Florida West, and the *Mowills*, or *Mobiles*, at one time very powerful along the Florida Coast. The

NATCHEZ, of different speech, formerly east of the Lower Mississippi, but nearly annihilated by the French in 1730. The survivors are now dispersed amongst the Creeks, Chickasaws, and others. The Natchez are said to have had three languages—one for the chiefs, one for the people, and a modified form of this for the women. The league further comprised the

HITCHITTEES, COOSADAS or COOSAS, ALIBAMONS, and APALACHES—all of kindred speech with the Creeks and Choctaws.

UTCHEES or Uchees, now merged with the Creeks, but originally speaking an independent language, which may have been akin to the Natchez, but which Gallatin classifies separately.

The Appalachians proper occupied originally all the northern shores of the Gulf of Mexico, from Florida to the Mississippi, extending inland to the southern extremity of the Alleghanies. In the elevated valleys of this range dwelt the

CHEROKEES or CHELEKEES, supposed to have migrated hither from the Mississippi valley, above the junction of the Ohio. They are divided into two branches—the *Otares* or highlanders, and *Ayrates* or lowlanders, and it is the former who call themselves Chelekees, or rather *Tsalagi*, there being no *r* in their dialect.

The origin of the Cherokees is involved in great obscurity, on which no light is thrown by their language, which is apparently entirely distinct from all other American tongues. They are now settled in Indian territory, where they have made more progress in civilisation than any other northern tribe. They possess a written literature, for which Segwoya, known as George Guest, invented a syllabic alphabet about the year 1824. This invention is the more extraordinary because Guest himself could neither read nor write, nor speak any language except his own, his only notion of writing being derived from hearsay and from an English book, the letters of

which, though unacquainted with their value, he contrived to utilise for his purpose. His system consists of eighty-five signs, of which one only, *s*, is a letter, all the rest being full syllables, that is, fifteen consonants generally in combination with six vowels, as, *ga, ge, gi, go, gu, gĕ*. This syllabarium almost completely analyses the sounds of the Cherokee language, and is therefore well adapted to it; but is, of course, necessarily useless for any other. The invention is altogether one of the greatest intellectual feats of which there is authentic record.

Other less important Appalachian tribes were the *Tonkaways, Timuacanas, Oconies, Oakmulgies, Pacanas, Conchattas, Pasgacolas*, and *Boluxas*, all apparently akin to the Muscogees, and either destroyed or absorbed by them. Lastly, the CATAWBAS and WOCCONS, or WOCCOAS, of North Carolina, classified apart by Gallatin, and for which see the general index.

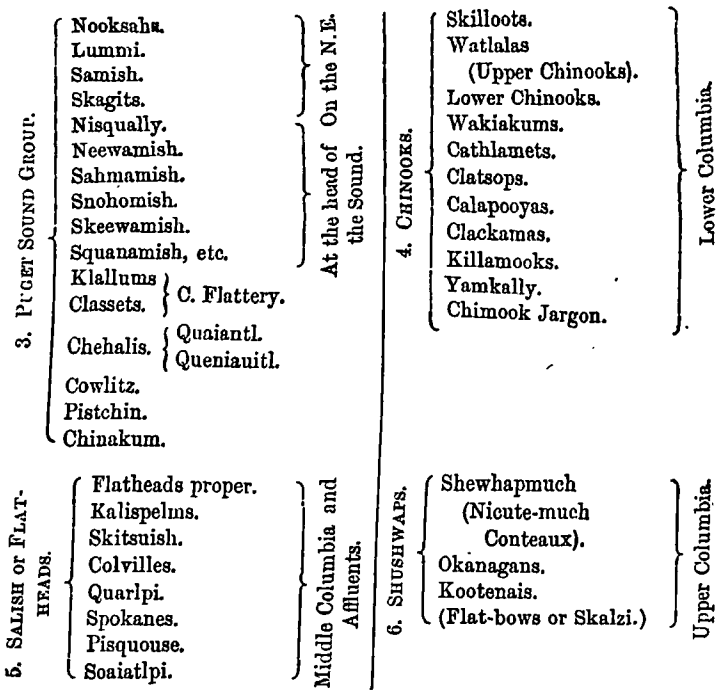
It thus appears that there are at least four stock languages in this division—the *Muscogee, Natchez, Cherokee*, and *Catawba*.

VII. COLUMBIAN RACES.

In this purely geographical division are comprised all the tribes on the north-west coast between the 43d and 55th parallels, or, in other words, the natives of British Columbia, Washington, and Oregon territories. They form altogether seven distinct groups, as under:—

1. HYDAHS.
   - Queen Charlotte Isles.
     - Massets.
     - Klue.
     - Kiddan.
     - Ninstance.
     - Skid-a-gate.
     - Skid-a-gatees.
     - Cum-she-was.
   - Kaiganies, Prince of Wales Isles.
   - Mainland and Pitt Isles.
     - Tsimsheeans.
     - Nass.
     - Skeenas.
     - Sebasses.
     - Hailtzas.
     - Bellacoolas.

2. NOOTKAHS.
   - Ahts.
     - Muchlahts.
     - Nitinahts.
     - Ohyahts.
     - Manosahts, etc.
   - Vancouver's Island.
     - Quoquoulths.
     - Komux.
     - Kowitchans.
     - Ucletas.
     - Klallums.
     - Sokes.
     - Patcheenas.
     - Sankaulutuchs.
   - Lower Fraser.
     - Kwantlums.
     - Teets.
     - (Haitlins).



7. Sahaptins or Nez Percés, including the *Palouse*, *Walla Wallas*, *Yakimas*, *Tairtlas*, *Kliketats*, or *Pshawanwappams*, *Cayuse*, and *Mollale*. The Sahaptins lie mainly between the Flatheads and the 45th parallel.

Hydah seems to be a term originally applied by Francis Poole to the Queen Charlotte Islanders collectively, and afterwards extended to kindred tribes in the neighbouring islands and on the opposite coast.

Nootka is a purely conventional term from Nootka Sound in Vancouver, and under it are comprised several nations, which are philologically quite distinct. Thus Sproat tells us expressly that there are at least three independent languages in Vancouver alone—the *Aht*, the *Quoquoulth*, and the *Kowitchan*, besides the *Komux* from the mainland. Aht is the generic name for twenty tribes on the west coast of Vancouver, first proposed by him from the syllable *aht* terminating all their names, which he identifies with *mah*, *maht*, or *mahte*, meaning

house, and which may be compared with the Eskimo *mute*, as illustrated in Section I.

With regard to the *Puget Sound* tribes, it may be mentioned that most of their idioms seem to be related to the *Salish* or *Flathead* of group 5, while the *Chinook* of group 4 Sproat thinks is undoubtedly akin to the Aht. But our knowledge of all these idioms is so imperfect that none of these affinities can be considered as yet established, and the groups have accordingly here been provisionally kept separate. Anyhow the Kootenais spoken by the Flatbows about the 49th parallel would seem to be entirely distinct from the tongues of all the surrounding peoples. The dialects also of the stock languages are here very numerous, those of the Flatheads for instance, about fourteen, and those of the Ahts quite as many, if not more.

VIII. Californian Races.

Though occupying one of the finest regions in America, the Californians are amongst the most degraded of all the native races, standing on the same low level as the Eskimos and the Fuegians of the extreme north and south. They speak a multiplicity of idioms, which have been very little studied, and whose mutual relations are extremely difficult to establish. Yet some of them, such as the Gallinomero of Russian River, possess considerable interest for the philologist, as showing the various stages of polysynthesis in actual process of development. The whole area stretching from about Lake Klamath to Cape S. Lucas, and inland to Nevada and the Lower Colorado, may be disposed in three geographical groups—the first extending from Lake Klamath to San Francisco Bay, the second thence southwards to the parallels of Fort Yume and S. Diego, the third embracing the whole of the Lower Californian peninsula. In the first or northern division we have the

Klamath family occupying the whole valley of the Klamath, and extending eastwards into Nevada. Besides the *Klamaths* proper, or *Lutuami*, about the lake, it includes the *Yacons*, *Modocs*, *Copahs*, *Shastas*, *Palaiks*, *Wintoons*, *Eurocs*, *Cahrocs*, *Lototens*, *Weeyots*, *Wishosks*, *Wallies*, *Tolewahs*, *Patawats*, *Yukas*, and

others between Eel River and Humboldt Bay. Farther south are the

POMOS or "People," the collective name of several tribes in Potter Valley, such as the *Castel Pomos, Ki, Cahto, Choam, Chadela, Matomey Ki, Usal* or *Calamet*, and *Shebalne Pomos*, besides the *Gallinomeros, Sanels, Socoas, Lamas*, and *Comachos*. In the

SACRAMENTO VALLEY are the *Ochecumne, Chupumne, Secumne, Cosumne, Sololumne, Puzlumne, Yasumne*, etc., altogether about 26 tribes, whose names mostly end in *umne*. Lastly the

NAPA group specified under *Napa* in the general index.

In the second or central division are the

RUNSIENS of Monterey Bay, whose speech seems to extend along the coast northwards to San Francisco Bay, and southwards beyond C. Conception, including, besides the *Olhones* and *Eslenes*, the Santa Cruz, San Miguel, and other insular idioms. In this division are also the *Lopillamillos, Mipacmacs, Kulanapos, Yolos, Suisunes, Talluchos, Chowclas, Waches, Talches, Poowells* of Lake Tulare, besides many others, most of whom are either already extinct, or will have disappeared before any serious attempt can be made to classify them.

The third division, including the whole of Lower California, is occupied by three stock languages, entirely independent of each other, and unconnected with any other linguistic group. These are the

COCHIMI.	Laymon. Ika.	Originally reaching from the head of the Gulf to the neighourhood of Loreto.
GUAICURI.	Cora. Monqui. Didiù. Liyùe. Edù. Uchitie.	South of the Cochimi. Between the 26th and 23d parallels.

PERICUI, from the 23° N. lat. to Cape S. Lucas, and including the islands.

In the southern extremity of California proper are the *Diegueños, Cahuillas*, and some others not here mentioned, because belonging linguistically to the *Shoshone* family, treated in our next Section. For the same reason the *Hoopahs* of Hoopah Valley will be found in Section II. Athabascan Family.

IX. Shoshone and Pawnee Families.

The Pawnees are by H. H. Bancroft and other high authorities included in the Shoshone group. But L. H. Morgan, after careful study, pronounces the Pawnee to be a stock, that is, an independent language, having no known affinities with any other. The two nations are accordingly here classed separately.

The Shoshone or Snake family, occupying parts of Oregon, Idaho, Utah, Wyoming, W. Montana, parts of N. Texas, New Mexico, and S. California, may be arranged in six main divisions as under.

1. Western Shoshones, or Wininasht of Idaho and Oregon.
2. Eastern Shoshones, Bannocks, or Diggers, ranging over N. Nevada, Oregon, and Idaho.
3. Utahs or Utes.
   - Utahs proper.
   - Washoes.
   - Pah-Utes.
   - Pah-Vants.
   - Pi-Edes.
   - Gosh Utes, etc.

   — Utah, Nevada, and the Colorado Valley down to Arizona and California.
4. Comanches, or Yetans.
   - Paducas.
   - Yamparacks.
   - Tenawas.

   — Roaming over N. Texas, N. Mexico, and parts of New Mexico.

   With whom ought probably to be included the Kiowas, formerly of Texas, now mostly in Kiowa Reserve, Indian Territory.
5. Moqui.
   - Taywah.
   - Shungayawe.
   - Shepowlawe.
   - Tualpis.
   - Mechonganawe.
   - Sechomewe.

   — These six Moqui pueblos speak a language akin to the Shoshone. The seventh Moqui pueblo, the Haro or Orehbe, speaks Tegua, as shown in the following section.
6. S. Californians
   - *Diegueños.*
     - Kizh.
     - Netela.
     - Kechi.

     — About S. Diego, whence their collective name.
   - *Cahuillo.*
   - *Chemehuevi.*

     — S. E. corner of California.

All these languages show certain Aztec affinities, both lexical and structural, affinities which Buschmann has traced as

far north as the Snake Valley. But they are not sufficiently extensive to establish anything approaching to real relationship. Such resemblances as exist, often restricted to the prevalence of the peculiar combination *tl* (*theotl*, *tlascala*, etc.), have been much exaggerated, and have served as the unstable basis for some very wild theories. But one thing is now well established. The linguistic evidence is on the whole rather opposed than favourable to the opinion of those who contend that the Nahuas migrated originally from the north to the Anahuac table-land. It should also be noted that the only affinity really ascertained to exist between group No. 6 of this scheme and the other Shoshones, is through the Aztec element common to all, as well as to Buschmann's "Aztec-Sonora" tongues treated farther on.

Of the PAWNEE family there are four groups as under:—

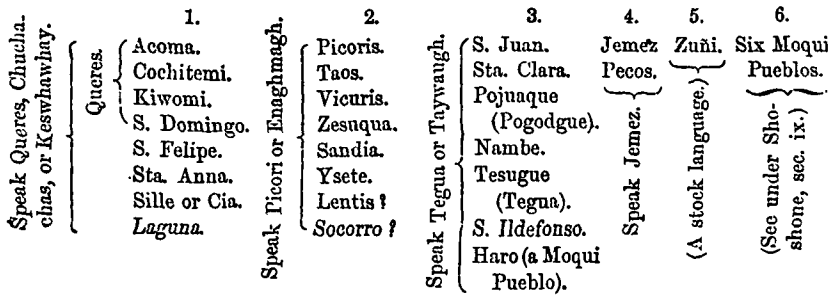
1. PAWNEES proper.	Chäné or Chowees. Kitkä or Kitkahoets. Skeedees. Petähänerat, or Pethowerats.	Pawnee Reserve, Nebraska, and in Kansas.
2. ARICKAREES or RICKAREES, on the Missouri.		
3. WICHITAS.	Kichais or Keechies. Waccoes or Huecos. Pani? Towaconies? Towiacks? Towekas? Wachos?	Between the Canadian and Red River of Texas.
4. CADDOES.	Nandakoas. Tachies. Aliches. Nabedaches. Jonies.	Originally of Louisiana and Texas, here grouped provisionally with the Pawnees, the affinity not being yet clearly established.

Here also may be mentioned the ADAIZE or ADEES, formerly of Louisiana, whose speech was probably akin to that of the *Natchitoches*, *Chetimaches*, *Attacapas*, and other extinct Louisiana nations. In Gallatin's Synopsis (*Schoolcraft*, iii. p. 401), Pani, Caddoe, Adaize, Chatimache, Attacapa, and Natchitoche figure as six independent stock languages, which means little more than that our information regarding them is very meagre.

X. New Mexican and Arizona Races.

The numerous peoples of this region may be disposed under three heads—the New Mexican Pueblos, the Arizonian Yumas, and miscellaneous.

William Carr Lane, who has given some attention to the subject, arranges the twenty-six semi-civilised Pueblos, that is "townspeople," in six linguistic groups as under:—



There are some errors in Carr's nomenclature, such as *il de Conso* for *Ildefonso*, which are here rectified. There are two Pueblos in No. 2, which, without naming, he tells us are near El Paso on the river Pecos. These are probably the *Lentis* and *Socorro* spoken of by other writers. *Ysete*, also in the same group, should perhaps be *Isletta*. He adds that all these languages "are extremely guttural, and seem to have sprung of the same parent stock" (*Schoolcraft*, v. 689), a remark that cannot apply to the *Zuñi*, No. 5, which is quite independent; nor to the six of the seven Moqui Pueblos, No. 6, which, as seen in foregoing section, speak a Shoshone or Snake language.

The Yumas, mainly on the Lower Colorado and Gilla, compose the *Yumas* proper at the junction of these rivers, the *Maricopas*, *Cuchans*, *Mojaves*, *Yampais*, *Yavipais*, and *Hualpais*.

In the Miscellaneous division must for the present be included the *Chevets*, *Covaji*, *Noche*, *Tamajab*, *Benemé*, with the *Tecuiche* and *Teniqueche*, and the *Cajuenche*, with the *Jalliquamai*, speaking independent, or rather not yet classified Arizona tongues.

XI. Mexican Races.

Even allowing the utmost extension to Buschmann's Aztec-Sonora family, there still remains an enormous number of independent and unclassified languages in this region. It will be convenient first to take this Aztec family, including in it all the idioms that betray any Aztec affinities, without further guaranteeing their actual relationship with that tongue:—

Aztec, Nahuatlac, or Mexican proper, current throughout Montezuma's empire, with linguistic affinities as far north as the Snake valley, and southwards to S. Salvador and Nicaragua. In Aztec polysynthesis receives its utmost development, yet it has been compared with or derived from Hebrew, Teutonic, Japanese, Sanskrit, etc., with a reckless indifference to sense and science.

Nicaraguan.	*Niquirans* or *Cholutees.*		Speaking almost pure Aztec, the first in Nicaragua, the others in S. Salvador.
	Pipiles.		
	Tlascaltecs.		
Cora . .	Ateakari.		These are the four members of Buschmann's Aztec-Sonora Group.
	Muntzicat.	Jalisco.	
	Teakualitzigti.		
Tarahumara.	Varagio.		
	Guazapare.	Chihuahua and Sonora.	
	Pachera.		
Cahita . .	Mayo.		
	Yaqui.	Sinaloa and Sonora.	
	Tehueco.		

Tepehuana, in N. Sinaloa, Durango, etc.

Shoshone Group, as in Section IX.

Pima . .	Upper Pima.	Sonora, Sinaloa, Lower Gila.
	Lower Pima.	
	Papago.	
	Sobaipuri.	
Opata . .	Eudeve; Teguis.	Sonora, wedged in between Upper and Lower Pima.
	Teguima; Batuca.	
	Coguinachie; Jova.	
	Sahuaripa; Himeri.	
	Guazaba.	
Acaxée? .	Tebaca; Sabaibo.	Sierra Madre, Durango.
	Mediotaquel; Hume.	
	Topia; Xixime.	

Tubar and Concho? in Chihuahua.

As some confusion seems to attach to the terms *Nahuna*, *Aztec*, and others applied to the historic Mexican race, it may be useful here to tabulate them, as thus :—

NAHUAS OR MEXICANS PROPER.

VI. Century.	*XI. Century.*	*XV. Century.*
Empire of the TOLTECS, Pyramid-builders.	Empire of the CHICHIMECS not known to have been originally Nahuas, but absorbed by them in the 15th century.	Confederacy of the AZTECS, cap. Mexico. ACOLHUAS, cap. Tezcuco. TEPANECS, cap. Tlacopan.
Cholula. Teotihuacan.		

} destroyed by H. Cortez, 1520.

Here may be conveniently grouped the other *civilised* Mexican nations, all of whom, except the Totonacs, spoke independent or stock languages :—

MIZTECS.[1] { Tepuzculano; Tlaxiaco Cuixlahuac; Cuilapa Nochiztlan ; Xaltepec Tamazulapa. } Originally in Mixtecapan or W. Oajaca and Puebla.

ZAPOTECS. { Zaachilla; Etla ; Beni Xono; Ocotlan ; Netzicho. Serrano { de Itzepec. de Cajonos. de Miahuatlan. } } In E. Oajaca, ruling over all the Techuantepec tribes.

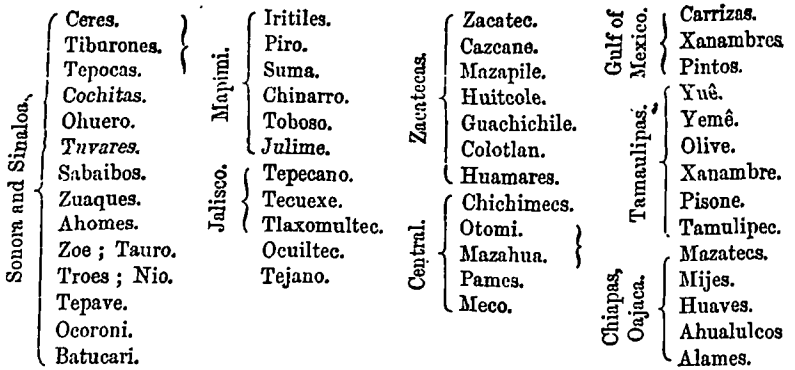
TARASCOS, in the kingdom of Michoacan, whose capital was Tzintzuntzan.

MATLALTZINCAS, between the Tarascos and the Aztecs.

TOTONACS, on the coast, east of Tlascala, in the north of Vera Cruz. Their speech was akin to the Maya-Quiché of the next section.

The uncivilised Mexican tribes, not included in the Aztec group, admit of no special classification. Taking them in their order, from north to south, the most important are—

[1] Miztec is remarkable, even among American tongues, for the astonishing length of its words. Here is one of seventeen syllables—yodoyokavuandisasikandiyosanninahasahan = to walk stumbling.

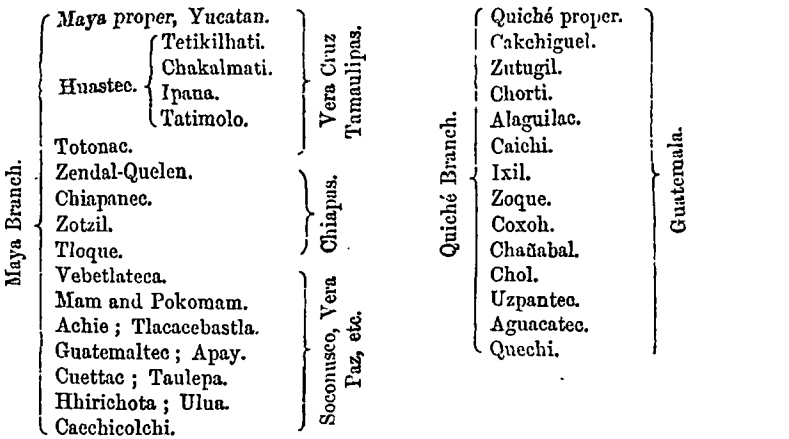


Of these the most interesting, and, next to Aztec, the most widely-diffused language in the Mexican empire, is the Otomi, apparently the only non-polysynthetic form of speech in America. It is not, strictly speaking, a monosyllabic idiom, though generally regarded as such, for words of two or more syllables are common enough, especially in the Mazahua dialect. But, on account of its monosyllabic tendencies, Najera, a native Otomi, has compared it with Chinese. Najera's grammar is an excellent treatise on his mother tongue, but his conclusions are otherwise visionary.

XII. Central American Races.

In this section will be comprised all the nations occupying parts of South Mexico, with the Yucatan peninsula, all the Central American Free States, and the Isthmus of Panama. Here is the great Maya-Quiché linguistic family, besides the smaller Lenca group, illustrated by Squier, and a chaos of tribes in the narrow strip between Nicaragua and the Gulf of Darien.

In its widest extent the Maya-Quiché family reaches northwards to Vera Cruz, where it is represented by the outlying Totonacs and Huastecs, and southwards to San Salvador. But its two principal branches are the Maya of Yucatan and the Quiché of Guatemala. Grouping the northern offshoot with the Maya, we get the subjoined twofold division of its numerous dialects :—



Of this family Maya may be taken as the stock language, and of Maya the purest form seems to be the Zendal of Chiapas. The famous "Americaniste," Abbé Brasseur de Bourbourg, who devoted many years to the study of Central American ethnology and antiquities, thinks he has discovered unmistakable affinities between the Maya-Quiché and Greek, Latin, French, English, German, etc., in fact he regards it not merely as related to, but as the primitive form of these languages. He does not seem to have perceived the absurdity of comparing together fully developed tongues, instead of the organic elements whence they sprang. In Maya the formative elements seem to be mostly prefixes, as in the Bantu languages, a process on the whole opposed to that of the Aryan, in which most of the grammatical modifications are suffixes.

In the Lenca family may here be conveniently included all the non-Maya idioms of Guatemala, Honduras, E. Nicaragua and the Mosquito Coast, though the affinity of some of them to the stock language has yet to be established.

Honduras, Guatemala.

- Guajiquero.
- Opatoro.
- Intibucat.
- Similaton.
- Chontales.
- Cholutecs.
- Lacandones. { Acalans. / Mayos. }
- Orotiñas.
- Manches.
- Inacos.

Mosquito; Nicaragua.

- Mosquito; Taos.
- Xicaques; Gaulas.
- Poyas; Itziles.
- Moscos; Motucas.
- Secos; Ramas.
- Woolwas; Caribs.
- Towkas; Sambos.
- Cookras; Smoos.
- Albatuinas; Toonglas.
- Tahuas; Xicaques.
- Panamekas; Jaras.
- Melchora; Olanche.

The greatest confusion seems to prevail regarding the ethnography of the Isthmian races, including all those occupying the region between the River S. Juan and the Gulf of Darien. Here are spoken at least four stock languages—the *Savaneric, Manzanillo* or *San Blas, Cholo*, and *Bayano*, while the *Darien* or *Dariel, Urabe*, and *Idiba*, have also been mentioned as independent tongues. To these must be added the *Doracho* of *Veraguas*, the civilised Doracho nation being still represented by a small tribe on the Pacific coast. No classification can be attempted of the other Isthmian tribes, amongst the most important of which are the

Costa Rica.

- Chiripo.
- Tiribi.
- Blanco.
- Chorotegan.
- Coribici.
- Guatusos.
- Terrabas.
- Changuenes.
- Buricas.
- Torresques.
- Toxas.
- Talamancas.
- Nicoya.
- Cerebaro.
- Nata.

Atlantic Coast.

- Chiriqui.
- Valientes.
- Catibas.
- Cubigas.
- Cutabas.
- Chagres.
- Cuebas.
- Mandingos.
- Pocorosas.
- Comagres.
- Caretas.
- Chicacotra.
- Sangana.
- Guarara.
- Cutara.

Pacific Coast.

- Escorias.
- Paris.
- Biruquites.
- Uracas.
- Chirus.
- Chames.
- Chepos.
- Jumagos.
- Chiapes.
- Birus.
- Chuchura.
- Quarecua.
- Ponca.
- Pocora.
- Zumanama.

Interior of the Isthmus.

- Payas.
- Caimanes.
- Cunacunas.
- Cunas.
- Panamá.
- Coiba.
- Chitarraga.
- Cocina.
- Guaineta.
- Motilone.
- Goajiro.
- Cimarron.
- Tule.
- Acla.
- Abieiba.
- *Abenamechay.*

XIII. Orinoco Races.

All the innumerable tribes and people of the southern continent may be conveniently arranged under five separate

heads, partly geographical and partly ethnological. It is premature to attempt a strictly scientific classification where so little is really known, and of that little so much is still uncertain. But though the arrangement here proposed is largely geographical, the well-defined families of languages will be kept carefully distinct within each of our five main divisions, as far at least as they have been definitely determined by ethnologists.

Under this first head are comprised all the nations occupying the region stretching from about the equator northwards to the Caribbean Sea, politically divided into the republics of New Granada and Venezuela, British, French, and Dutch Guiana, and a narrow tract within the northern frontier of Brazil. Here we have a large number of stock languages, each split up into many subdivisions, besides many other idioms that still remain to be classified. Of the distinct families by far the most important is the

CARIB, the name of a race that has been identified by some writers with the prehistoric Alleghewis of the Mississippi valley, which at the discovery of the New World was found in possession of a large number of the West India Islands, which has since then been either exterminated or expelled from those islands, and which is now found skirting the shores of the Caribbean Sea (so named from them) from the Isthmus of Darien nearly to the mouth of the Amazon, and stretching far inland in Venezuela and Guiana. The Caribs call themselves *Carina*, *Callinago*, or *Calina*, a corrupt form of which word is *cannibal*, in European languages now synonymous with anthropophagist. The principal Carib tribes, all specified in the general index, are the

Guachiri.
Guauves.
Purugotes.
Avarigotos.
Acherigotos.
Arinagotos.
Kirikirisgotos.
Chaymas.
Cumanogottes.
Tomuzas.
Piritus.
Cocheymas.
Chacopatus.
Topocuares.

Tamanacs.:
Pariagotos.
Oje.
Maitanos.
Paiure.
Crataimas.
Parechi.
Cucciveros.
Uara-Mukuru.
Uara-Paccili.
Oyampis.
Galibios.
Arecumas.
Waiyamara.
Guayanos.

Arawaks.
Guaques.
Pianogotos.
Tiverigotos.
Carabisi.
Acaways.
Macusi.
Arecunas.
Soerikong.
Maiongkong.
Makiretaris.
Woyawais.
Mawakwas.
Daurais.

Wapisianos.
Oyapoks.
Warikena.
Pasimonari.
Cunipusanas.
Masacas.
Yahabanas.
Paumonasis.
Mandaucas.
Guaharibos.
Palencas.
Guaraunos.
Aturais.

Next to the Carib, the most important family in this region is the BARRÉ, illustrated by Wallace, and by him made to include the Maypures and others formerly regarded as independent. Besides the Maypures, it comprises the *Barré* proper of Tomo and Maroa, the *Baniwas* of the Isamna and Javita, the *Chirupas, Avanes, Caveres, Tucanos, Coretus, Juris, Acheguas,* and *Parenis,* mainly in Guiana; lastly, the MOXOS nation, of Moxos in Bolivia, whose affinity to the Maypures may now be taken as established. Moxos dialects in the St. Xaverio mission are the *Mochono, Baure, Tikomeri, Chuchu, Kupeno,* and *Mosohe.* It may here be mentioned that all the Venezuelan and Guayana languages belong either to the Carib or Barré family, except the WAROW of the Orinoco Delta, probably a Guarani-Tupi idiom, and the OTOMAC towards the New Granada frontier, which speech seems to be completely isolated.

In New Granada itself there are several families of speech, of which the most important historically is that of the civilised CHIBCHAS, or, as they call themselves, MUISCAS,[1] "Men." This was the dominant race in and about Bogotá at the time of the Spanish conquest, and the only people in the world who used gold as currency in the form of discs cast in a mould (Ballaert). They are not to be confused with the MUZOS, with whom they were always at war; nor with the TUNJAS, whose speech was different, as was also that of the MALABAS, a wild tribe, still found on the San Miguel in Esmeralda. In the provinces of Popayan there are or were altogether ninety-four distinct tribes, the following being the most important:—*Pachanchicas, Masteles, Abades, Yancales, Sanquampueso, Guanacas, Paes, Antagaimas, Coyaimas, Timanaes, Nievas, Noannamaes, Chocôes, Andaquies, Pijaos, Barbacoas, Coconucos,* and *Mocoas.* On the east bank of the Upper Orinoco, and in the Casanare district, are the SALIVI, formerly powerful, and the most musical of the native American races. The *Atures,* now extinct, the *Quaquas* of the Popayan Cordilleras and the Cuccivero, and the *Macos* or *Piaros* on the Cataniapo, are all related to the Salivi. Some writers have also connected with them the *Yaruras, Betois,* and *Eles* of the Casanare and Meta. Other New Granada tribes are the *Quaquaro,* said to speak a dialect of the Ele, the *Gambias, Polindarras, Inganos, Zeonas* (?) *Putenanos,* and on the Lower Atrato the *Urabas, Chocos,* and *Dabaibas,* showing affinities with some of the Isthmian tribes.

[1] From *mu,* body, and *isca,* five; *i.e.* body of five extremities.

XIV. Amazon Races

Comprise all the known tribes dwelling along the main stream and all its affluents from the Atlantic seaboard to Peru and Ecuador. Here no classification can be attempted beyond this geographical arrangement. "It will never be possible for two consecutive travellers to agree on the names and localities of the Amazonian Indians. The vagabond tribes are shifting, while some become extinct, or multiply by a process of self-division. About one hundred are known; the rest flit like spectres through the forest."—(James Orton, *The Andes and the Amazon*," 1876.)

In this region are spoken a vast number of idioms, most of them probably based on the Tupi, but now so entirely distinct in substance that it is no longer possible to trace the affinity. They have little in common with it or with each other except their polysynthetic structure, which, as already explained, is not of itself alone sufficient to prove community of origin. For a distance of 2500 miles along the Amazon, from its mouth to the Iquitos, Tupi is the *Lingoa Geral*, or general medium of communication. Beyond this point, on the Ucayali, it is succeeded by the Pano, which is itself now being supplanted by a corrupt form of the Quichua. The Panos themselves are extinct.

The Amazonian Indians occupy a very low position intellectually and socially. Few of them can count beyond three or five, and their idioms diverge so rapidly that even neighbouring tribes are unable to converse together except through the common medium of the Lingoa Geral. The subjoined comparative table of a few simple words collected by Orton amongst some of the tribes will help to show how entirely distinct their dialects are. The tribes here mentioned, as well as most of the others in this region, will be found in the alphabetical list, and need not therefore be farther specified here. They are mostly insignificant in power and numbers, even the Mundrucus, who are the largest and most widely diffused, not numbering more than 8000 heads all told:—

English.	Tupi.	Quichua.	Omagua.	Tucuna.	Yagua.	Cocáma.	Jevero.	Zaparo.	Conibo.	Campa.	Pammary.	Caripuna.	Cayuaba.	Mobima.	Maropa.
Man .	abagasa	runa	apisara	iyate	huano	yapisara	..	..	huovo	chirari	..	..	cratasi	itilacua	uni
Woman	cunha	huarmi	huay-naou	ihié	huatu-runa	huayna	quapi-luja	..	..	chinani	gamu	..	..	cutscha	yutscha
Father	ipaya	yaya	tapapa	..	yen	tatahua	papa	apochó-jo	papa	apa	bi-y				
Mother	imaya	mama	tamama	..	nihuá	..	ahua	anno	tita	ina	miá				
Head .	iacan	una	..	..	..	yaki	mutu	..	huasca	nogoti	..	mapo	nahua-racama	bama-cua	mapo
Hand .	po	maqui	..	..	samutú	itua	..	cui-choác	..	naco	..	..	daru	sojpan	muipata
Foot .	pui	chaqui	..	..	nimutú	pinta	landic	cuiñocá	tai	nocha-pagari					
Water .	e .	yacu	yacu	dechieh	aah	unê	dik	..	nasin	churu	paha	oni-passna	ikita	touni	jene
Fire .	tata	nina	tata	ejheh	jigney	tata	prin	..	ichi	chichi	sijú	tschu	idore	véé	tschii
Day .	ara	punchas	ara	hunehi	ñiana	curachi	ookliii	..	..	quita-huiti	..	sabaka			
Night .	putuna	tuta	epuesa	suitan	nipora	ipsuisa	dikpilik	..	..	echiti-niqui					
Sun .	corace	ynti	veï	ehajeh	hini	curachi	quecki	..	vari	poriatiri	safini	baari	nharaman	tinno	vari
Moon .	yacé	quilla	yacé	tahue-majeh	ari-maney	yasi	duquir	..	ushi	cachiri	massicú	ursche	viare	yetso	oche
One .	yépé	shuc	uyëpé	hueih	tiqui	huipi	alaza	noqui	avicho	impo-quiro	..	aares			
Two .	mocoën	ishcay	mocuy-ka	tare-pueh	nanoijoi	moque-qua	catuta	amasa-niqui	raboï	pitari	..	eranbue			
Three .	meso-pére	quinsa	mosa-perika	tome-pueh	momuhi	mutsa-purika	cala	imucú-marnqui	..	camiti	..	kimis-cha			

The statement that most of the Amazonian idioms may be connected, does not apply to the following, spoken mainly in the valley of the Napo:—JIVARO, a fierce and unconquered race, between the Chinchipe and the Pastassa, divided into many sub-tribes, such as the *Moronas*, *Pautes*, *Zamoras*, *Gualaquisas*, *Upanos*, *Pindos*, *Pastassas*, *Agapicos*, *Achuales*, and *Cotopasas*, all speaking varieties of the clear, harmonious, and energetic Jivaro language. ZAPARO, upon the upper waters of the Pastassa and Napo, subdivisions of whom are the *Mueganos*, *Curarayes*, *Tupitînis*, *Matagenes*, *Yasunies*, *Mantas*, *Shiru-Punos*, *Nushinos*, *Andoas*, and *Rotunos*. The Zaparo is described as a simple, guttural, and nasal tongue. ANGUTERA, on the Middle and Lower Napo, of whom the *Santa-Marias* are a branch. ENCABELLADA, widely diffused on the Lower Aguarico. OREJONES (*big-eared*), at the mouth of the Napo. AVIJERAS, on south bank of Lower Napo, akin to the *Yquitos* and *Mazanes*. COFANES, on the head waters of the Aguarico. MANGACHES, in Palenque Alto. CAPAYAS and COLORADOS, in the forests east of Quito.

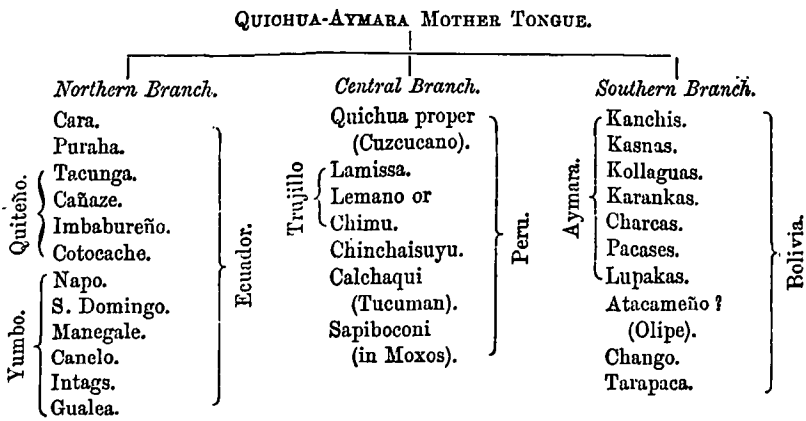
XV. PERUVIAN AND BOLIVIAN RACES.

Under this heading will be grouped all the western nations not included in other divisions, extending from the equator to about the 32° S. lat., and comprising the greater part of Ecuador, nearly the whole of Peru and Bolivia, and the northern parts of Chili and the Argentine States, as far south as the Saladillo. Here we meet with the great

QUICHUA-AYMARA family, by far the most interesting, and, next to the Guarani, the most widely diffused in South America. Under one or other of its three main divisions, this language is current throughout Ecuador, Peru, the greater part of Bolivia, and in North Chili, as far as the southern limits of the Atacama Desert. These main divisions are the *Quichua*, perhaps the most polished of all native American tongues, and formerly spoken everywhere in the empire of the Incas; the AYMARA, probably an older or more primitive form of the Quichua, the principal language of Bolivia; and QUITEÑO, the leading speech of Ecuador, regarded as a northern branch of the Quichua, modified by local elements, though some, with Bollaert, look on it rather as a primitive form of the common

mother tongue, on to which the Quichua was grafted after the conquest of this region by the Inca Huayna-Capac; it is at least nearly certain that both the original Quito, or *Puruha*, and even the still more ancient *Cara* itself (see Index) were related to the language of the conquerors.

The three branches of this family may be tabulated as under:—



It may here be mentioned that at the time of the Spanish conquest there were in the great kingdom of Quito no less than forty nations, all speaking different languages, with as many as three hundred dialectic varieties. Of these stock languages, all of which will be found in our alphabetical list, the greater number had already perished towards the close of the last century, and since then the process of extinction has been going on at an accelerated rate, so that at present the familiar sounds of the Quichua and the Spanish are now alone heard on the western slopes of the Andes. East of the Cordilleras there are still spoken several independent forms of speech, which may here be specified:—

In MOXOS, besides *Moxos* proper, above included in the Carib family, we have the *Sareveca, Chapocura, Itene, Movima, Cayuvava, Pacaguara, Itonama, Sapiboconi, Herisebocona, Mure, Canisiana.*

In CHIQUITOS: *Chiquitos* proper, or *Naquiñoñeis* ("men"), *Morotoco, Tao, Boro, Zamañuca, Bocca, Quibicuica, Piocaca, Piñoco, Quimeca, Quitaxaca, Guapaca, Paioconeca, Canichana, Zamucu,*

Kaipotorade, Otuki, Chiriguana (a Guarani idiom)—all apparently related except the *Zamucu* and *Chiriguana*.

It should be observed that most of these tribes seem to have been gathered into the Moxos and Chiquitos missions from various quarters by the Jesuits, their position here somewhat resembling that of the North American tribes now settled in the Indiana territory, Nebraska, and other "Reserves."

In ECUADOR, mainly about the head streams of the Amazon, the *Iquitos, Xumanos* or *Chimanos* (a Guarani tribe), *Pebas, Yaguas, Ticunes, Shimigues, Mayorunas*, and lastly *Omagua*, which will be further specified in our next Section.

In CHACO, the MOCOBI family, very numerous and branching off into several subdivisions, such as the *Mocobi* or *Mbocobi* proper, on the Vermejo and Ypita; *Abiponians*, mainly between the Pil, comayo and the Paraguay, subdivided into the *Maquegigaguehec, Rucahee*, and *Jaconaiga; Aguilots* and *Pitilagas* on the Pilcomayo; and *Toba* between the Pilcomayo and the Vermejo. The *Chumipy*, on the south bank of the Vermejo, though sometimes classed with this group, would seem to speak a totally different language. VILELA-LULE family, including the *Vilela* proper, with its subdivisions *Ontoampa, Yeconoampa, Ipa, Pasaine*, on the Upper Salado, and the *Chunupies, Yoocos, Yccoanitas, Occles, Uacaas, Atalalas, Sivinipis*, in the forests watered by the Vermejo; *Lule* proper, about Miraflores on the Upper Salado, and thence to the Vermejo, whose chief tribes are or were the *Iritine, Tokistine, Oristine*, and *Tonocote*, identical with the famous *Mataras* of the early Spanish writers. With this family should perhaps be grouped the MACHICUY or *Cabanataith*, subdivided into about twenty bands, mainly on the Middle and Upper Pilcomayo, and the METAGWAYA or MATAGUAYI, with numerous sub-tribes, such as the *Matakos, Hueshuos, Pesatupos, Abuchetas*, and *Imakos*, all between 21° to 24° S. lat. Towards the Bolivian frontier of Gran Chaco are the AQUITEQUEDICHAGAS, said to be a remnant of the Cacocys or *Orejones* of the first Spanish invaders. Lastly the NINAQUIGUILAS, subdivided into several bands, roaming over the forests between Gran Chaco and Chiquitos. In this vast and little known region the Lingoa Geral is not current.

XVI. BRAZILIAN RACES SOUTH OF THE AMAZON.

Though mainly occupied by the Guarani, by far the most widely diffused of all the South American nations, there is still room in this vast region for a countless number of

non-Guarani tribes, about most of which very little is known, and whose scientific grouping cannot of course be even attempted. But into all this chaos some order has already been introduced, and, besides the Guarani, three extensive families have been mapped out. This certainly leaves a large number of idioms which must for the present be left unclassified, or treated as independent. But it is better to arrange them in this way than to group them, as some writers do, with systems with which they have often really nothing in common. The four well-defined groups are the GUARANI, which, like the Quichua-Aymara, branches off into three great subdivisions, as thus :—

GUARANI FAMILY.

Southern and Western Branch.	*North-Eastern Branch.*	*North-Western Branch.*
Guarani proper of the Paraguay missions, Uruguay, Rio Grande do Sul.	Tupi (the Lingoa Geral, sometimes called Brazilian.)	Omagua proper.
Western. Chiriguana.	Tappes.	Enaguas.
Western. Guarayi.	Petiguares.	Aguas.
Western. Cicionos.	Tupinabas.	Yurimaguas.
Western. Dioguites.	Cahetes.	Cocama. Cocamilla. Huebo.
	Tupininquins.	Yete.
	Tapiguae.	Tocantins.
	Tummimivi.	*In the valley of the Rio Negro.*
	Tamoiae.	Aruaqui ; Atauhys.
	Tuppinambas.	Terecumas ; Hiabaanas.
		Caripunas ; Manaos.
		Carahiahys ; Cocrunas.
		Juris.

The localities of these various tribes will be found more definitely settled in the alphabetical list. Here it may be well to establish their mutual connection, seeing that this has again been called in question by ethnologists of some weight. Amongst them is Frederick Müller, who in his *Ethnographie* ("Voyage of the Navarra," vol. xxiii. p. 25,) classifies the Guarani, Tupi, and Omagua under three separate and independent heads. Yet their close affinity had already been determined in

the days of Hervas, and re-asserted by Balbi (Table XXVIII.), and may here be seen by the reader for himself, with the help of the subjoined comparative list of a few radical words :—

	Guarani.	*Tupi.*	*Omagua.*
man	ava.	aba.	aba.
hand	pua.	po.	pu.
foot	pueta.	pi.	pi.
head	yacae.	acang.	acanga.
sun	huarassi.	quarassi.	coaracy.
moon	yase.	yasi.	iaci.
fire	tata.	tata.	tata.
water	uni.	i.	i.

It may be mentioned that these idioms abound in nasal gutturals, and in monosyllables, many of these, as in the Trans-gangetic tongues, varying in meaning with the tone or accent.

PAYAGUA-GUAYCURU family, including the *Guaycurus* proper, or *Cavalleiros*, on both sides of the Paraguay, subdivided into four bands, formerly speaking two sister languages—the *Mbaya* (extinct), and the *Enakagas*, now universally spoken by all the Guaycurus; *Payaguas* or *Nayaguas*, formerly very powerful, commanding the navigation of the Paraguay, now greatly reduced, and residing near Asuncion in Paraguay; *Cadique* and *Magach*, extinct Payagua tribes; *Juiadge* (the *Lenguas* of Spanish writers) formerly between the Pilcomayo and the Paraguay, now extinct (?); *Cochaboths* or *Enimagas*, and Guentuse in Chaco.

GÊ, GÊZ or GEIKO family, comprises the Gêz proper, called also Jahycos, of Maranhão and Gr. Para, subdivided into the *Paycob-gêz*, *Ao-gêz*, *Cran-gêz*, *Canacata-gêz*, *Ponkata-gêz*, *Apina-gêz*, on the Tocantins; and one or two others, besides the TIMBIRAS or CRANS of Goyaz, of whom there are three subdivisions—the *Matta*, *Cancella fina*, and *Bocca furada Timbiras*.

PURYS family, comprising the *Purys* proper in the provinces of Rio Janeiro, Spirito Santo, and Minas Geraes; *Coroados* and *Coropos* in the same region; *Goytacas*, *Sacarus*, and *Guarus*, formerly in Rio Janeiro.

CAMACAN family, embracing the *Camacans* or *Mongoyos* in Bahia; *Meniengs* formerly on the Rio Belmonte, extinct; *Camacaens*, visited by Spix and Martins; *Malali*; *Machacaris*, near the Rio Belemonte and Santa Cruz; *Maconis*; *Monoyos de Passanha* and *Patachos*—all in Porto Seguro.

Of the isolated and unclassified nations the following claim special notice :—

BOTOCUDOS, on the Brazilian coast range, between the Rio Dolce on the

south, and Ilheos in Bahia on the north. Formerly very numerous and powerful, now reduced to a few thousand through the systematic brutality and atrocious cruelty of the Portuguese. The old Commendador boasted to Professor C. F. Hartt that he had either killed with his own hand, or ordered to be butchered with knife, gun, and *poison*, many hundreds of these poor creatures. Speech totally distinct from Guarani or any other. The Botocudos are rather yellow than copper coloured, and not very dark, whereas the

CHARRUAS of the Banda Oriental, about 33° S. lat., are described as almost black. They were nearly exterminated by the Uruguay government in 1831.

KIRIRI of Bahia, formerly very numerous, speaking a language that has been compared with the Tamanak, Moxos, Tupi, etc., but which F. Müller seems justified in regarding as independent. The *Sabuja*, also of Bahia, speak a kindred tongue.

BORORos, in Matto Grosso, of whom the *Barbados*, *Coroados* (different from those of Minas Geraes), and the *Yaraics*, seem to be kindred tribes.

GUATOS and BACCAHIRIS, also in Matto Grosso, neighbours of the Bororos.

CAYAPOS and CHAVANTES, the most numerous nations in Goyaz.

GUAYANAS, GUANANAS or GUALACHAS, in the province of S. Paulo, quite distinct from the Carib Guayanos, mentioned in section xiii., as well as from the

GUANOS of Chaco and of Paraguay, the most numerous nation in these regions next to the Guarani, and subdivided into several bands, such as the *Ethelena*, *Chabarana*, *Layana*, *Echoroana*, *Equiniquinao*, and *Niguecactemic*.

All the other important Brazilian tribes will be found in the Alphabetical List.

XVII. SOUTHERN RACES.

This last division covers the remainder of the continent from about the parallel of Rosario southwards to Cape Horn, but west of the Andes stretching as far north as perhaps Copiapo, or the southern limits of the desert of Atacama. It thus includes the greater part of Chili, the southern portion of La Plata between the Saladillo and the Rio Negro, the whole of Patagonia and Tierra del Fuego. Here the leading race are the brave

ARAUCANIANS, who have been called the Iroquois of the Southern Continent. They occupy the whole of the Chilian Cordilleras south

of the desert of Atacama, and have in recent times descended the eastern slopes of the Andes, settling at various points along the course of the Upper Rio Negro. They are divided into many tribes, all speaking one language with apparently but little dialectic variety, and entirely different from any other known tongue. Their most generic names would seem to be *Auca*, *Chilidugu* or *Moluche*, by which they call themselves, and *Araucan*, the name by which they are known to the Spaniards. Their principal subdivisions are the PICUNCHES, "Northern People," along the Cordilleras from about Coquimbo southwards to Santiago; *Puelches*, "Eastern People," east of the Cordilleras, as far as Mendoza in Cuyo; *Pehuenches* or *Pucnches*, "Pine People (from *pepuen*=pine), between the 35°-40° S. lat., by the Picunches sometimes called *Huilliche*, "Southern People," from their southern position; the *Auca* or *Moluche* proper, between the Biobio and the Valdivia, who are the *Araucans* of the "Araucana" and some other Spanish heroic poems. Lastly, the *Vuta Huilliche*, extending from the *Pucnches* along the coast southwards to the Straits of Magellan, and subdivided into the *Chonos* of the Chonos Archipelago and Chiloe, *Poy yas* or *Peyes* between the 48°-52° S. lat., and *Key yus*, *Key yuhues*, or *Keyes*, from the 52° S. lat. to the Straits of Magellan, with whom should perhaps be classified the *Canchi* between the Valdivia and the Gulf of Guayateca. All these Patagonian Araucanians speak Chilian idioms corrupted by a large mixture of Patagonian words. Other Araucanian dialects are the *Allentiac* and *Milcocayac*, spoken by the *Guarpes* in the province of Cuyo. Our next family is that of the

PUELCHES, or "Eastern People," as the Araucanians call them, who are the *Pampas* Indians of the Spaniards, and the *Penck* of the Patagonians. Their language has been compared with the Araucanian and Patagonian, but the Rev. T. F. Schmid, the very best, if not the only authority on the subject in England, informs us that it is entirely different from both, and apparently from any other known tongue. The term *Puelche*, as already stated, indicates nothing more than the geographical position of this people relatively to Chili, and must be carefully distinguished from the same term as applied to the *Eastern* or *Puelche* Araucanians, as above classified. The Pampas Indians roam from the Saladillo southwards to the Rio Negro, where many of them have already become absorbed in the Araucanian Puelches, who, Mr. Schmid says, have migrated to the banks of this river as far east as the frontier penal settlement of El Carmen and Bahia Blanco, belonging to Buenos Ayres. He adds that their language is said to be rapidly dying out, being superseded partly by the Araucanian and partly by Spanish.

The vast and dreary region extending from the Rio Negro to the Straits, and known as Patagonia, seems to be exclusively occupied by one race, at least between the Atlantic seaboard and the Cordilleras. These are the PATAGONIANS, or as they call themselves, the TSONECAS, or as they are called by the Araucanians, the

TEHUELCHES or CHUELCHES, about whose gigantic size so many contradictory accounts are given by travellers. The last two terms (from *tehul* or *chul*=south, and *che*=people) mean Southern People; but though frequently classified with the Chilians, Mr. Schmid again assures us that the two races, or at least the languages, are entirely distinct. In a list of 2000 Tehuelche and Araucanian words, which he compared, he found only two alike —*patac*=a hundred, and *huarunc*=a thousand, words obviously borrowed by the former from the latter people. The Northern and Southern Tehuelches, or Tehuelhet, as the word is sometimes written, seem to present marked differences. The Northerners have been subdivided into the *Callilehet* or *Serranos* (highlanders) on both sides of the Upper Chupat, and the *Culilan-Cunnee* between the Chupat and the Rio Negro. They are often confused with the *Chennas* (warriors) or *Manzoneros* of the former Jesuit station of Las Manzanas, who seem to be an Araucanian tribe, slightly disguised by a thin coating of Spanish and Christianity. The Southern Patagonians are again subdivided into the *Yacana-Cunnee*, on the northern shores of the Straits of Magellan, and the *Schuau-Cunnee*, between them and the Rio Desire. These last two names are sometimes, but it would seem incorrectly, transferred to the southern shores of the Straits, and applied to the

FUEGIANS, or natives of the "Land of Fire," on whom every fresh traveller visiting those inhospitable shores seems to confer a fresh generic name. The fact is, that these debased and scattered tribes have no general name at all, and it is now well ascertained that the archipelago is inhabited by at least two, if not three different races, physically resembling each other, but speaking languages related neither to each other nor yet to the Patagonian. For this statement we have also the authority of Mr. Schmid, to whom we are much indebted for the valuable data that have enabled us to clear up many obscure points connected with the ethnology of the southern races. From the foregoing remarks it will be noticed that in this region there are, allowing two for the Fuegians, altogether five distinct races and forms of speech, which may be thus conveniently tabulated :—

PATAGONO-CHILIAN RACES.

- *Araucanians.*
- Picunches.
- Puelches.
- Pehuenches.
- Huilliches.
- Auca or Molluches proper.
- Chenna or Manzoneros.
- Cunchis.
- Allentiacs.
- Milcocayas.

- Puelches, Pampas or *Penecks.*
- Chechehet.
- Divihet.
- Taluhet.

- Patagonians or *Tehuelches.*
- Tehuelches proper.
- Callilehet or Serranos.
- Cuillan-Cunnee.
- Yacana-Cunnee.
- Sehuau-Cunnee.

- Fuegians or Pesherais.

North.	*South.*
Yahgan.	Kemenetes.
Foot Indians.	Kennekas.
Yucanacus.	Karaikas.

ALPHABETICAL LIST

OF

ALL KNOWN AMERICAN TRIBES AND LANGUAGES.

Abades	In Popayan, New Granada.
Abanes	New Granada; N. of the Orinoco.
Abangoui	Guarani; on the Taquani, Paraguay.
Abbitibbes	Algonquin stock; Kree branch.
Abeicas	Muscogee; in 1750, on the Tombigbee river.
Abenaki (Wapanachki)	Algonquins; Maine, N. Hampshire, originally; later on, Canada. The term means "Eastlander," but is unsatisfactory and vague. The Chippeway now apply it to some Iroquois at Green Bay. The Abenakis proper were on the Kennebek, and their head-quarters at Nanrantsouak or Norridgewock.
Abenamechey	Isthmian group; Darien.
Abieiba	Isthmian group; Darien.
Abiponians	A Mocobi nation between the Pilcomayo and Paraguay. Chief tribes—Rucahee, Jaconaiga, and Naguegtgaguchee.
Abitegas	Quichua stock; Tarma, Peru, E. of the Andes.
Absentee	A Shawnee tribe now in Sac and Fox Reserve, Indian territory.
Abuchetas	A Metagwaya band in Gran Chaco.
Abwoins	The Sioux, so called by the Chippeways.
Acalans	The Eastern Lacandones; Guatemala. See Lacandones.
Acaxees	Near Topia, in Durango, Mexico; unclassified.
Acaways	Carib stock; Guaiana and Venezuela, but chiefly on the Demerara.
Accocesaws	Formerly in Texas, and W. side of the Colorado; speech apparently isolated.
Accohanocs, Accomacks	Algonquin; Powhaten group, formerly on the Accomac in E. Virginia; extinct.
Accomentas	A Pawtucket band, formerly in N. Massachusetts.
Acheguas	A Barré tribe in Guiana.
Acherigotos	A Carib tribe on the Venezuelan Llanos.
Achie	Maya stock; in Suchitepec and Guatemala.
Achuales	A band of Jivaros, which see.
Acla	Isthmian group; Panamá.

Acolhuas	One of the three confederate nations in Anahuac at the time of the Spanish conquest; most probably Nahua or Aztec stock. Their capital was Tezcuco in Anahuac.
Acoma	A tribe of the Queres, which see.
Acquinoshionee	The ancient name of the Iroquois for their confederacy, meaning a league of tribes.
Adaes, Adees, Adaize	Formerly near Natchitoches, Louisiana; speech said to be isolated.
Adirondacs	The New York Algonquins, so called by the Iroquois. The term means "he eats trees."
Adoles	A Salivi band in Orinoco; destroyed by the Caribs in 1684.
Agaces	A powerful nation on the Paraguay; subdued in 1542 by de Vaca.
Agapicos	A band of Jivaros, which see.
Agawams	Algonquins; a Wampanoag tribe of Merrimack River, Essex County, Massachusetts; extinct.
Aglegmutes	The Koniaga Eskimos of Bristol Bay; the proper name of the American Chuckchis.
Aguacatec	Maya stock; in Guatemala.
Aguaricos	See Encabellados.
Aguarumas	Amazon group; on the Santiago, flowing into the Upper Amazon at 78° W. long.
Aguas	An Omagua (Guarani) tribe on the Upper Orinoco, in New Granada.
Aguilots	A Mocobi tribe on the Pilcomayo.
Agulmutes	The Koniaga Eskimos between the Kuskoquim and Kishunak.
Ahahaways	Same as Mattasoons, which see.
Ahahnelins	Or Gros Ventres of the prairies; Algonquin stock; akin to the Arapahoes, on the Lower Milk River, Montana. Some writers group them with their allies the Dacotahs.
Ahoma	On the Zaque river, Sinaloa.
Ahmaudahkas, Ahnaudahkas, Anadakkas	S.W. Texas, akin to the Caddos; live on the Brazos river, below Fort Belknap.
Ahnahaways	Or Black Shoes; a Crow tribe on the Upper Missouri.
Ahrendahronons	The most north-easterly Huron tribe; absorbed by the Iroquois in 1649.
Ahts	The generic name of most of the tribes on the W. coast of Vancouver; first applied to them by Sproat, from the syllable *aht*=*maht*=house, with which most of the tribal names end. All speak dialects of the same language. Sproat gives a list of twenty tribes, of which the Nitinahts at Barclay Sound are perhaps the most important.
Ahualulcos	In Goazacoalco and Tabasco, S. Mexico.
Aibino	In Sinaloa and Sonora; unclassified.
Alaguilac	Maya stock; in Guatemala.
Alames	In Chiapas, S. Mexico.
Alausi	A Quito race; eight tribes; all extinct.

Albatuinas	Lenca family; on Blewfields Lagoon, Nicaragua.
Aleuts	The natives of the Aleutian islands, whose speech is entirely distinct from the Eskimo, says Buschmann.
Aliches	A Caddo band; in 1805 living near Natchitoches.
Algonquin	Next to the Athabascan the largest family in North America; treated in Sec. iii. of Appendix, p. 465.
Algoomenquini	The Algonquins of the early writers.
Alibamas, Alibamous	Formerly on the Alabama; of the Creek stock, and partly incorporated by them. Others migrated to Texas, and in 1840 were settled on the Trinity with the Coshattas.
Allakaweah	A Crow tribe on the Snake River; called also Pauch.
Allca	An ancient race S. of Cuzco; ultimately subdued by the Quichuas under Manco Capac.
Allentiac	An Araucanian dialect spoken by the Guarpes in Cuyo.
Alleg, Allegans, Alli, Allighewis	The aborigines of the Upper Mississippi Valley; expelled thence southwards by the Algonquins in the eleventh (?) century; have by some been identified with the Caribs, which see. The name still lives in the word Alleghany, the great mountain range of the Eastern States.
Alseas	Now in Alsea Reserve, Oregon; unclassified.
Amajuacas	Amazon group; on the Ucayali, above the Pachitea.
Amalicites	See Milicetes.
Amalistes	Algonquins; on the St. Lawrence in 1760.
Amariscoggins	Algonquins; subject to the Pennacooks; on river of same name, New Hampshire; extinct.
Ambawtamoots	Athabasca stock; about 53° N. lat.; called also the Sheep Indians.
Amicways	Formerly on the Manatouline islands, L. Huron; extinct.
Amikouis	See Dionondaties.
Amuzgo	A dialect of Zapotec, which see.
Anahuacs	More properly Nahuas or Aztecs, which see.
Anasuguntakook	An Abenaki tribe, formerly in Maine.
Andaicos	Texas (1851).
Andastes	Formerly on L. Erie; confederates of the extinct Eries.
Andastiquez	See Susquehannocks.
Andaquies	In Popayan, New Granada; unclassified.
Andoas	Amazon group, on the Pastassa; a Zaparo tribe.
Angamarca	A Quito race; two tribes; extinct.
Angutera	Amazon group, on the Middle and Lower Napo.
Anlygmutes	The Koniaga Eskimos of Golovnin Bay.
Antagaimas	In Popayan, New Granada; unclassified.
Antis	See Campas.
Ao-gêz	Gêz family, on the Tocantins, Brazil.
Apaches	The southernmost branch of the Athabascan family, roaming over N. Mexico, Arizona, Utah, New Mexico, Texas, etc. The Apaches proper call themselves Shis Inday = men of the woods. The Apaches are subdivided into a great number of bands known mostly by Spanish names, such as Tontos, Llaneros, etc.

Apalaches	The great family of Florida and the Lower Mississippi. The Apalaches proper were a powerful nation in Florida; visited by de Soto in 1539.
Apalachicolas	On river of like name in Florida; akin to the Creeks.
Apay	Maya stock; in Acacabastla and Chiquimula.
Apichiqui	A Quito nation, subdued by Huainacapac, 13th Inca.
Apina-gêz	Gêz family; on the Tocantins, Brazil.
Apiacares	Amazon group; on the Tapajos.
Appiacas	In Arinos, Matto Grosso; unclassified.
Apurimas	Amazon group; on the Purus.
Aquaauchuques	In 1659 in the centre of New Jersey; Algonquins? extinct.
Aquatzaganes	Formerly in Pennsylvania.
Aquitequedichagas	In the N. of Gran Chaco; said to be a remnant of the Cacocys.
Arrapahoes Arapahoes	"The tattooed people;" on the Upper Arkansas, Nebraska, and Platte rivers, and generally east of the Rocky Mountains. Speech shows more affinity with Algonquin than with Sioux; it is akin to Cheyenne. Some now in Cheyenne Reserve, Indian Territory; others in Red Cloud Agency, Wyoming.
Araras	Amazon group; on the Xingu, Madeira, and Tapajos.
Arauas	Amazon group; on the Jurua, above Gaviaõ, and on the Jutahi.
Araucanians	The aborigines of Chili; never subdued by the Spaniard; distinct from the Puelche or Pampas, and from the Tehuelches or Patagonians.
Aravipais	In Camp Grant, Arizona.
Arawaks	A Carib tribe on the coast of Guiana, as far S. as the Amazon; supposed to have been originally driven from the Lesser Antilles to the mainland.
Arda	In Quijos, not far from Quito; unclassified.
Arecuma	A Carib tribe; Guaiana.
Arecunas	A Carib tribe in Venezuela.
Aricaree	Akin to the Pawnee; in 1850 in Missouri Valley, 47° N. lat.
Arinagotos	A Carib tribe on the Venezuelan Llanos.
Arkansas	See Quappas.
Armouchiquois	An Abenaki tribe; formerly on the St. John, New Brunswick.
Arosagantakuk	Algonquin stock, New England; extinct.
Arrenamuse	Formerly on the S. Antonio, Texas.
Artez	A Kutchin tribe on the Yucon.
Aruaquis	Tupi stock; left bank of the Negro.
Assiniboines Assinipotuc	Dacotah stock; Red River of the N. and W. of L. Winnepeg; separated from the Sioux at an unknown date; called "Hohas," or *rebels*, by the Dacotahs, and Stone Sioux by some writers.
Atacameños	The Atacama Indians, now limited to the N. extremity of Chili; usually classed as Aymaras, but a list of 180 words in their language shows no resemblance to the Aymara or Quichua tongues; are dying out.

Atalalas	A Vilela tribe on the Vermejo.
Ataronch-ronons	One of the five Huron tribes; in 1624 on the N. shore of L. Huron.
Atauhys	Tupi stock; valley of the Rio Negro, Brazil.
Ateacari	See Cora of Jalisco.
Athabascan	The great northern family, the Tinney of some writers, treated in Section ii. p. 463 of Appendix.
Atkhas	The Aleuts of the Andreanovski, Rat and Bear Islands.
Atnahs; Ah-tena	The Kenais of the Copper or Atnah river, called also Nehannes; by some classed with the Athabascan Tacullies. These Atnahs are the Yellow-knives of some English writers. See also Shewhapmuch.
Attacapacas, Attacapas	"Man-eaters;" a Louisiana tribe, said to be of Carib stock; extinct.
Attapulgas	A Seminole tribe; in 1820 living near the Ololikana river.
Attignawattans, Attigneenonguahacs	Wyandot tribes; extinct.
Attignaouentans	Or Bear Nation; Hurons consisting of twelve lodges in 1624.
Atticamiques	Algonquin tribe; destroyed by pestilence in 1670; lived in the N. of Canada.
Attikamegs	Algonquin stock, Kree branch; probably the same as the Atticamigues, which see.
Attiquenongmahai	Huron tribe, consisting of three lodges in 1624.
Attiwandaronk	See Neutral Nation.
Atures	An extinct Salivi tribe, New Granada.
Aturias	A Carib tribe in Venezuela.
Auca	Same as Araucanian, which see.
Auks	Thlinkeets S. of the Takoos, which see.
Avanes	A Maypur tribe on the Orinoco.
Avarigotos	A Carib tribe on the Venezuelan Llanos.
Avijeras	Amazon group, on S. bank of Lower Napo; akin to to the Yquitos.
Axij-paias	Amazon group; on the Xingu.
Aymaras	Quichua family; Bolivia and Southern Peru. Probably an older race than the Quichuas, but conquered by them about 1100. Are still quite distinct from the Quichuas. Aymara is one of the most guttural languages in the world, but very expressive and sonorous.
Aztecs	The Mexicans proper of Anahuac. Their speech was the most widely diffused in the empire of Montezuma. Its affinities have been traced northwards, especially by Buschmann, as far as the Shoshones of Snake Valley; while it was spoken almost purely as far south as the parallel of Lake Nicaragua. See Nahua and Toltec.
Babine	A tribe of the Tacullies, which see.
Baccahiris	An unclassified Brazilian race in Matto Grosso.
Bacra	Or Ningretongo, the Negro-English of Surinam, with a recent admixture of Dutch. Its structure is English.

Bahama	Formerly spoken in the Bahamas; was entirely distinct from the two stock languages of the Great and Lesser Antilles.
Baniwas	Large Barré tribes on the Isamna and Javita.
Bannocks	The Eastern Shoshones of Nevada, parts of Oregon and Idaho; some now in Fort Hall Reserve, Montana and Shoshone Reserve, Wyoming.
Barbacoas	In Popayan, New Granada, unclassified.
Barbados	Akin to the Bororos, which see.
Barré	A large family between the Orinoco and the Caribbean Sea.
Barré proper	On the Tomo and Maroa.
Basopa	In Sinaloa and Sonora; unclassified.
Batuca	A dialect of the Opata, which see.
Batucari	In Sinaloa and Sonora, unclassified.
Baure	A dialect of Moxos in the S. Xaverio Mission, Moxos.
Bayamos	Isthmian group on the Rio Chapo, Pacific coast of Panamá.
Beaver	The Chipewyans of the Peace River.
Bellacoolas	A Hyda tribe about Millbank Sound, British Columbia.
Benemé	S. Arizona and Sonora; unclassified.
Beni Xono	A tribe of Zapotecs, which see.
Bersiamites	See Oumamiawak.
Bethuck	Algonquin stock; Newfoundland and neighbouring coast; extinct.
Betoi	A large New Granada tribe, akin to the Yaruras (and Salivi?)
Billoxies	Red River, Louisiana; extinct.
Biruquites	Isthmian group; Pacific coast of Panamá.
Birus	Isthmian group; Pacific coast of Panamá.
Blackfeet (Satsika)	Most probably Algonquin; originally between the forks of the Saskatchewan, and more recently as far south as the Marias river. Their four bands are, the Blackfeet proper, Blood, Peigans, and Small Robes. Some are now in Blackfeet Agency, Montana.
Blackfoot	A band of Teeton Dacotahs.
Black Shoes	See Ahnahaways.
Blancos	Isthmian group; Costa Rica.
Blancs	The Menomenees, so called by some French writers.
Blood (Kahna)	See Blackfeet and Sarcees.
Bocca	An unclassified tribe in Chiquitos.
Bolixes	S.W. Texas; unclassified. Called also Paluxies.
Boluxes	Akin to the Mobiles, which see; formerly in Louisiana; extinct
Bororos	An unclassified Brazilian race in Matto Grosso.
Boso	An unclassified tribe in Chiquitos.
Botocudos	An unclassified Brazilian race on the coast range between 15° and 20° S. lat.; called also Engerecmunk, Aymores, and Ambures.
Bravas	Amazon group, on the Xingu.
Brothertons	The name adopted by a number of Mohican, Pequot, and other Algonquin tribes, who emigrated to

	Oneida County with Sampson Occum. Having taken to speak English, they seem to have ultimately merged with the white population of Wisconsin.
Brulés	A band of Teeton Dacotahs.
Brushwood	Properly Tsillawdawhoot; an Athabascan tribe.
Buricas	Isthmian group; interior of Costa Rica.
Burues	Amazon group; on the Upper Jutahi.
Buruquetas	See Biruquites.
CABANATAITH	Same as Machicuy, which see.
Cabres	See Caveres.
Cacocys	A primitive race said to be still represented by the Aquitequedichagas of Gran Chaco. They were called Orejones by the Spaniards.
Caddoes, Cadodaquinons	Originally of Arkansas; in 1825 on Red River, Louisiana; now on the Brazos, below Fork Belknap, in S.W. Texas. Speech common to the Nandakoes, Nabadaches, Inics, and Tachies.
Caddons	Now in Indian territory.
Cadiques	An extinct Payagua tribe; Paraguay.
Cadloes	Now in Wichita Agency, Indian territory.
Caechicolchi	Maya stock; in Vera Paz.
Cahetes	A Tupi tribe on the San Francisco in Pernambuco.
Cahita	One of Buschmann's four "Aztec-Sonora" tongues; on the E. shore of the Gulf of California, between 26° and 28° N. lat., and inland nearly as far as the Tarahumara. The Cahitas include the Yaquis and Mayos.
Cahoquias	Algonquin stock; akin to the Kaskasias, which see.
Cahroes	A Klamath tribe on the Upper Klamath, N. California; speech entirely different from that of the Eurocs on the Lower Klamath.
Cahuillas	About the S. Bernardino and S. Jacinto Mountains, S. California. These are now grouped with the Shoshone or Snake family.
Cahuimets	In Sinaloa and Sonora; unclassified.
Caichi	Maya stock; in Guatemala.
Caimánes, Caomanes	Isthmian group; Atlantic coast of Darien.
Caishanas	Amazon group; on the Tunantins.
Cajuenche	Akin to the Jalliquamai, which see.
Cakchiquel	Maya stock; in Guatemala.
Cakokiams	Akin to Chehalis; now in Chehalis Res., Washington.
Calapooias	Now in Grande Ronde, Oregon, nearly extinct.
Calapooyas	A Chinook (Columbian) tribe in the Willamette Valley.
Calchaqui	The original speech of Tucuman; passes for a Quichua idiom.
Californian	A geographical term, including all the numerous races of this region; treated in Sec. viii. of Appendix, p. 475.
Calispells	In Fort Colville, Washington.
Callilehet	The Tehuelches proper; between Chiloe and 44° S. lat.
Camacan	A large family in Bahia and Minas Geraes.

Camacaens	A Camacan tribe, Bahia.
Cambeas	Amazon group; on the Iça, back of San Paulo.
Camijos	Amazon group; on the Purus.
Campas	Or Antis; Amazon group; on the Tambo and Perene, tributaries of the Ucayali.
Camutás	Amazon group; west bank of the Tocantins, nearly extinct.
Canacata-gêz	Gêz family; on the Tocantins, Brazil.
Canamarys	Amazon group; on the Purus.
Cañar	An extinct Quito race, of which there were 25 tribes.
Cañazes	A Quiteño dialect; Quichua family.
Cancons	Roundy Valley, California.
Canibas	Algonquins, eastern branch; extinct.
Canichánas	Amazon group; on the Mamore, a tributary of the Madeira.
Canelo	An extinct Quito race; speech akin to Quiteño.
Canees	A Texas tribe, originally at St. Bernard's Bay, Gulf of Mexico.
Canisiana	An unclassified tribe in Moxos.
Canoys	Algonquin stock, Mohegan branch; extinct.
Capayas	Amazon group; in the forests of Ecuador.
Carahiahys	Tupi stock; valley of the Rio Negro, Brazil.
Carajas	Amazon group; on the Xingu.
Carankoways	A Texas tribe, unclassified.
Caranquin	An extinct Quito race, of which there were eight tribes.
Carapucho	On the Pachitea, an affluent of the Ucayali; speech said to be unlike any other known tongue.
Caras	The prehistoric race believed to have come from the Peruvian coast and conquered Quito about 1000 A.D. Some have connected them with the Caribs, bringing them from the east. Their speech was akin to Quichua, and they introduced the letter *o* into the Quito variety of that tongue. Of the Caras there were seven tribes at the conquest.
Carabisi	A Carib tribe in Venezuela.
Caretes	Isthmian group; Atlantic coast of Panamá.
Caribs, Carina, Callina, Callinago, *i.e.* "people"	The original race of the Windward and other West India Islands; here extinct, but still forming a large family along the shores of the Caribbean Sea from Honduras to the Amazon. Said by some to be descended of the Galibios of Panamá; by others supposed to be the Allighewis of the Mississippi Valley, which see.
Caribs of Honduras	Half-caste Indians and Negroes; on the S. coast of Honduras.
Caripunas	Amazon group; on the Madeira, near the rapids.
Caripunas	Tupi stock; on the Rio Negro, different from the foregoing.
Carriers	See Tacullies.
Carrizas	On the Gulf of Mexico, S. of the Rio Grande; unclassified.
Catawbas or Cuttawas	An isolated tribe, on the Catawba, in S. Carolina; by some thought to be either the Eries or the "Neutral Nation," who escaped hither about 1656

	from the Iroquois. Are now absorbed in the Chickasaws and Choctaws.
Catauixis . . .	Amazon group; on the Purus, Teffé, and Jurua.
Cathlamets . . .	A Chinook (Columbian) tribe; between the Cowlitz and the Pacific.
Catibas . . .	Isthmian group; Atlantic coast of Panamá.
Catuquinas . . .	Amazon group; on the Jurua and Jutahi.
Cauqui . . .	The language of the Indians of Yanyos, Peru; akin to Quichua.
Cavalleiros . . .	"Horsemen;" the name given by the whites to the Guaycurus, which see.
Caveres . . .	A Barré tribe on the Upper Orinoco and Cuccivero.
Cawasumseuks . .	Algonquin stock; akin to the Pequods, New England.
Caxararys . . .	Amazon group; on the Purus.
Cayamba . . .	An extinct Quito race.
Cayapos . . .	An unclassified Brazilian race in Goyaz.
Cayases . . .	Now in Umatilla Reserve, Oregon.
Cayuabas . . }	Amazon group; on the Mamoré, tributary of the
Cayowas . . }	Madeira.
Cayugas . . .	One of the Iroquois nations, New York; now in Cattaraugа and Tonowanda Reserves New York.
Cayuse . . .	A Nez Percé (Columbian) tribe in the Blue Mountains.
Cayuvavas . . .	An unclassified Moxos tribe.
Cazcanes . . .	In Zacatecas and S. Luis Potósi, Mexico; unclassified.
Celdales . . .	See Tzendales.
Cerebero . . .	Isthmian group; Costa Rica.
Ceris . . .	On the N. coast of Sonora.
Chabaranas . . .	A tribe of Guanas, which see.
Chacksihoomas }	Appalachian stock; akin to the Chickasaws; ex-
Chackchi-oomas }	tinct?
Chacobos . . .	Amazon group; on the Mamoré, a tributary of the Madeira.
Chacopatas . . .	A Carib tribe in Barcelona, Venezuela.
Chacuyungo . .	An extinct Quito race.
Chagres . . .	Isthmian group; Atlantic coast of Panamá.
Chäné . . .	See Chowees.
Chames . . .	Isthmian group; Pacific coast of Panamá.
Chakalmati . .	A tribe of Huastecs, which see.
Changuenes . .	Isthmian group in the W. of Costa Rica.
Chañabal . . .	Maya stock; in Guatemala.
Chango . . .	An Aymara tribe on the coast S. of Arica.
Chapacuras . . .	An unclassified Moxos tribe.
Charcas . . .	An Aymara dialect; Bolivia.
Charrib . . .	Same as Kariff, which see.
Charruas . . .	An unclassified Uruguay nation in the Banda Oriental.
Chasta-Scotons . .	Now in Malhuer Reserve, Oregon.
Chasutas . . .	Amazon group; on the Huallaga.
Chatino . . .	A dialect of Miztec, which see.
Chaudières . . .	"Kettles;" a Flathead tribe at the Kettle Falls, whose real name is Quarlpi.
Chavantes . . .	An unclassified Brazilian race in Goyaz.
Chaymas . . .	A Carib tribe on the Guarapiche and Colorado.
Chehalis . . .	Puget Sound (Columbian) group; on the Chehalis river, and in Chehalis Reserve, Washington.

Chelekee	See Cherokee.
Chemehuevi	Shoshone stock, akin to Cahuillo; S.E. California, and Colorado River, Arizona.
Chepos	Isthmian group; Pacific coast of Panamá.
Cherohakah	Same as Nottoway, which see.
Cherokees	More correctly Chelekees; Appalachian stock; a leading member of the Creek confederacy, but speech quite different from Muscogee. Now mostly in Indian territory. A few still in Georgia and Tennessee.
Chetimacha	A Louisiana tribe; extinct; unclassified.
Chevet	S. Arizona and Sonora; unclassified.
Cheyennes	About 1770 driven from L. Winnipeg by the Assiniboines; in 1830 on Platte and Missouri. Speech akin to Arapahoe, and showing some affinity with Algonquin, though often wrongly grouped with Dacotah. Some now in Cheyenne Reserve, Indian territory; some in Red Cloud Agency, Wyoming.
Chiapanec	Maya stock; in Chiapas, S. Mexico.
Chiapes	Isthmian group; Pacific coast of Darien.
Chibchas	The ruling race in and about Bogotá, New Granada, at the time of the conquest.
Chicacotra	Isthmian group; Panamá.
Chichimec	The generic name of a multitude of tribes in the hills N. of the Valley of Mexico. The Chichimecs were one of the three confederate Nahua nations at the time of the Spanish conquest, and the Chichimec empire flourished from the eleventh to the fifteenth century, when it was absorbed in that of the Aztecs proper. Who the Chichimecs were is not very clear. They do not seem to have been Nahuas originally.
Chickahomonies	Algonquin stock, Powhattan group, Virginia; extinct.
Chickasaws	Appalachian stock; akin to the Creeks; now in Indian territory.
Chicoras	The term applied by the Spaniards to the original tribes of the coast of Georgia and the Carolinas. Probably identical with the Utchees, which see.
Chigantualga	See Natchez.
Chilidugu	A generic name of the Araucanians, which see.
Chilious	Apache stock; Camp Apache, Arizona.
Chilkats	The Thlinkeets of Lynn Canal.
Chilkotin	A tribe of Tacullies, which see.
Chillicothe	Algonquin stock; akin to the Kickapoos; extinct.
Chimanos	A Guarani tribe in Ecuador.
Chimbo	An extinct Quito race.
Chimsyans	See Tsimsheeans.
Chimu	A Quichua dialect, spoken in Trujillo.
Chimus or Yungas	The aborigines of the coast S. of Lima to Piura; speech distinct from Quichua. They were formerly very powerful; now nearly extinct. Their country extended 200 leagues along the coast, and their civilisation was probably older than that of the Incas.

Chinantec	A dialect of Miztec, which see.
Chinarro	A tribe in the Bolson de Mapimi, Mexico.
Chinchas, Chinchasuyo	By some thought to be one of the three primitive races of Peru before the Incas; still found on the coast about Lima; speech akin to Quichua.
Chinook	Columbian group, mainly on the Lower Columbia. Rivalled in harshness by the Thlinkeet alone. The natives themselves are said to be generally abandoning it for the Chehalis and the Chinook Jargon. Some now in Chehalis Reserve, Washington.
Chinook Jargon	The neutral speech of Oregon, Washington, Vancouver, extending inland to Idaho and Montana. Structure extremely simple; vocabulary limited to about 500 words, of which about 200 are Chinook, 94 French, 70 English, 40 Chehalis, the rest miscellaneous.
Chipewyans, Chippewayans	The generic name of numerous Athabascan tribes between Hudson's Bay and the Rocky Mountains; to be carefully distinguished from the Chippeways, who belong to the Algonquin family. Chippewyan = dead dog, is the Kree name of this people, who call themselves Tinney = men.
Chippeway, Chippewa	Same as Ojibway; Algonquin stock. Some in Upper Canada, and about 20 bands in Michigan.
Chiquitos	The Manquiñoñeis, who are the leading nation in Chiquitos.
Chiriguana	A Guarani tribe near the Pilcomayo, between 18° and 22° S. lat.
Chiripos	Isthmian group; Costa Rica.
Chiricaguis	An Apache tribe.
Chiriqui	Isthmian group; Chiriqui Hills, S. of Costa Rica.
Chirupa	A Maypur tribe on the Upper Orinoco.
Chirus	Isthmian group; Pacific coast of Panamá.
Chisedek	An extinct Montagnais tribe at Bay of Seven Islands, Labrador.
Chitarraga	Isthmian group; Panamá.
Chocktaws	Appalachian stock; akin to the Creeks; now in Indian territory.
Chocôes	In Popayan, New Granada; unclassified.
Chocos	Isthmian group; Darien.
Chocos	On the Lower Atrato, New Granada; unclassified.
Cho-ko-yem	N. Californian; Sonoma valley.
Chol	Maya stock; in Guatemala.
Choles	In Chiapas, S. Mexico.
Cholos	Isthmian group; Pacific coast of Darien.
Cholones	Amazon group; on the Huallaga.
Cholutecs	E. of Fonseca Bay.
Cholutees	Same as Nicaraguans, which see.
Chonos	In the Chonos Archipelago and Chiloe; Araucanian family.
Chontales	In Goazacoalas and Tabasco, S. Mexico.
Chonquiros	Amazon group; on the Pachitea and Urumba, affluents of the Ucayali; called also Pirros.
Chorotegans	S.E. of Fonseca Bay, Nicaragua. Sub-tribes were

	the Dirians, the Nagrandans of Leon, and the Orotinans of Guanacaste.
Chorti	Maya stock; in Guatemala.
Chowan or Chawah	An extinct Catawba tribe, S. Carolina.
Chowclas	On the Fresno river, Central California.
Chow-e-shak	N. Californian Eel River; idiom akin to that of the Clear Lake tribes.
Chowees	Properly Chäné; a Pawnee tribe.
Chuchacas	See Queres.
Chuchura	Isthmian group, Panamá.
Chuchu	A Moxos dialect in the S. Xaverio Mission, Moxos.
Chuckchis	See Aglegmutes.
Chuelches	See Tehuelches.
Chugatshes	The Koniaga Eskimos of Prince William Sound.
Chumanas	Amazon group; on the Teffé.
Chumipy	On S. bank of the Vermejo; unclassified.
Chunupies	A Vilela tribe on the Vermejo.
Chupumne	On E. bank of the Sacramento, California.
Cicionos	A Guarani tribe; N. of S. Cruz de la Sierra.
Cimarron	Isthmian group; Darien.
Cipos	Amazon group; on the Purus.
Clackamas	A Chinook (Columbia) tribe, originally in the Willamette Valley; a few now in Grande Ronde, Oregon.
Classets	Puget Sound (Columbian) tribe; about C. Flattery.
Clastops, Clatsops	A Chinook (Columbian) tribe; between the Cowlitz and the Pacific. Some now in Chehalis Reserve, Washington; others in the Grande Ronde, Oregon.
Coahuilas	Some in Klamath Reserve, Oregon; others on the Colorado, Arizona.
Cobeus	A Barré tribe in Guiana.
Cocamas	On the Tigre; an Omagua (Guarani) tribe.
Cocamillas	A sub-tribe of the Cocamas on the Ucayali and Huallaga; an Omagua tribe.
Cochaboths	A Guaycuru tribe in Chaco; called also Enimagas.
Cochitas	In Sinaloa; unclassified.
Cochenawagoes, Cocknawagas	A Mohawk tribe, now absorbed in the Algonquin Minsis.
Cocheymas	A Carib tribe in Barcelona, Venezuela.
Cochimi	A Lower Californian race, originally from the head of the Gulf to Loreto; speech distinct from that of all other Lower Californians.
Cochitemi	A tribe of the Queres, which see.
Cocinas	Isthmian group; Darien.
Cocknawagas	Same as Cochenawagoes, which see.
Coconucos	In Popayan, New Granada; unclassified.
Cocopahs	At Port Isabell, California, and on the Colorado, Arizona.
Coerunas	Tupi stock; valley of the Rio Negro, Brazil.
Cœur d'Alêne	See Skitsuish.
Cofanes	Ecuador; 75° W. long., 1° N. lat.; Amazon group.
Coguinachie	A dialect of the Opata, which see.
Coibas	Isthmian group, Panamá.
Colchattas	Akin to the Creeks; migrated from W. Florida to the Mississippi; extinct.

Collinas	Amazon group; on the Jurua.
Colotlan	In Zacatecas, Mexico.
Columbians	Several distinct races; treated in Sec. vii. Appendix, p. 473.
Colorados	Amazon group; in the forests of Ecuador.
Colusas	On W. bank of the Sacramento, California.
Colvilles	A Flathead tribe, near the Kettle Falls and on the Columbia northwards to the Arrow Lakes; some now in Fort Colville, Washington.
Comachos	In Anderson Valley, Central California; unclassified.
Comagres	Isthmian group; Atlantic coast of Panamá.
Comanches	Live between the Colorado and Red River; call themselves Niyuna, and are subdivided into Comanches proper, Yamparecks, and Tenawas. They belong to the Shoshone or Snake stock.
Comoporis	In Sonora; unclassified.
Concho	In the Bolson de Mapimi, Mexico; akin to Miztec, which see.
Conches	A tribe in Florida West; Chickasaw stock; extinct.
Congaree	An extinct Catawba tribe; S. Carolina, on river of like name.
Conibos	Amazon group; on the Jurua, and ranging from Sarayaen to the head of the Purus.
Conoy	Algonquin; formerly in Pennsylvania; extinct.
Cookras	Akin to the Towkas, which see.
Coosadas or Coosas	Muscogees; originally on the Coosa and Tuscaloosa branches of the Alabama.
Coosahs	An extinct Catawba tribe; S. Carolina.
Coosucks	Algonquins; originally at the sources of the Connecticut; subject to the Pennacooks; extinct.
Copahs	A Klamath tribe; on the Upper Klamath, N. California.
Copalurcos	Amazon group; right bank of Middle Napo.
Copeh	N. Californian; Putos Creek.
Copper	See Tantsawhoots.
Cora	One of Buschmann's four "Aztec-Sonora" tongues, spoken in Jalisco; not to be confounded with the Cora of Lower California; called also Ateakari.
Cora	Guaicuri dialect, Lower California. See Guaicuri.
Coretus	A Barré tribe in Guiana.
Coribici	Inland from Fonseca Bay, S. Salvador.
Coroados	Akin to the Bororos, which see.
Coroados	A tribe of the Purys; in Minas Geraes, Brazil.
Coroas	Appalachian stock, Chickasaw branch.
Coropos	A Pury tribe in Minas Geraes, Brazil.
Coshattas	Living with a remnant of the Alabamas on the Trinity Reserve, Texas, in 1840; were originally from the Red River, Louisiana.
Cosumne	On E. bank of the Sacramento, California.
Cotocaches	A Quiteño dialect; Quichua family.
Cotos	Amazon group; Lower Napo, left bank.
Cotopasas	A band of Jivaros, which see.
Couteaux	See Nicute-much.
Covaji	S. Arizona and Sonora; unclassified.

Cow Creeks	In Grande Ronde, Oregon; nearly extinct.
Cowlitz	Puget Sound (Columbian) tribe; on the Cowlitz river.
Coxoh	Maya stock; in Guatemala.
Coyaimas	In Popayan, New Granada; unclassified.
Coyoteros	An Apache tribe.
Cran-gêz	Gêz family; on the Tocantins, Brazil.
Crans	See Timbaras.
Crataimas	A Tamanac (Carib) tribe on the Lower Orinoco.
Cree	See Kree.
Creeks	The Muscogees, so called from the numerous creeks in their country.
Crows	Dacotah stock; Yellowstone Valley, westward to the Rocky Mountains. Their proper name is Upsaroka. By some included in the Shoshone group.
Cubigas	Isthmian group; Atlantic coast of Panamá.
Cuchan	A Yuma tribe, Arizona.
Cucciveros	A Tamanac (Carib) tribe on the Lower Orinoco.
Cuebas	Or Kuevas; Isthmian group; Atlantic coast of Panamá.
Cuettac	Maya stock; in Suchitepec and Guatemala.
Cuicatecs	A dialect of Miztec, which see.
Cuilapa	A tribe of Miztecs, which see.
Cuixlahuac	A tribe of Miztecs, which see.
Culilan Cunnee	The northern Tehuelches or Patagonians.
Cumanogottes	A Carib tribe, formerly in Cumana, Venezuela.
Cum-she-was	A Hyda tribe, Queen Charlotte Islands.
Cunas	Isthmian group; Atlantic coast of Darien.
Cunacunas	In Choco, New Granada; unclassified.
Cunaguaras	A Carib tribe between the Caripe hills and Maturin.
Cunchi	An Araucanian tribe S. of the Valdivia.
Cundirumarca Cundinimarca	The name applied by some writers to the people and country about Bogotá.
Cunipusanas	A Carib or Barré tribe in Guiana.
Curarayes	A tribe of the Zaparas, which see.
Curinaias	Amazon group; on the Xingu.
Curitus	Amazon group; on the Jupura, about 72° W. long.
Cutabas	Isthmian group; Atlantic coast of Panama.
Cutara	Isthmian group; Panamá.
Dabaibas	On the Lower Atrato, New Granada; unclassified.
Dacotah Dakota	The Sioux family; treated in Sec. v. of Appendix, p. 470.
Darien Dariel	Isthmian group; Darien.
Daurais	A Carib tribe in Venezuela.
Degathee Dinees	See Kutchins.
Diaguites	A Guarani tribe, formerly in Tucuman.
Dibas	Same as Idiba, which see.
Diegueños	The collective name of several tribes in the southern extremity of California, about S. Diego. Of these the most important are the Kizh and Netela, which see.
Diggers	See Bannocks.

Dinné, Dinè Dinneh	Same as Tinney or Athabascan, which see.
Dionondaties	The Michigan Wyandots; same as the Amikoris of French writers.
Dog-ribs (Thing-è-ha-dtinne)	Athabascans between Great Slave and Great Bear Lakes; called also Slaves, Slavés, and Yellow-Knives.
Dorachos	Apparently the prehistoric and civilised people of Veraguas, south of Costa Rica. The monuments and inscriptions ascribed to them seem to be totally different from those of the Aztecs and Mayas. A Doracho tribe still exists on the Pacific coast about the 9° N. lat.
D'Wamishes	Now in Dulalip Reserve, Washington.
Eastern Shawnees	Algonquin stock; now in Quapaw Reserve, Indian territory.
Echibies	In the south of Matto Grosso; unclassified.
Echoroanas	A tribe of Guanas, which see.
Edchawtawoots	An Athabascan tribe.
Edgpüluk	Algonquin; a Delaware tribe now or lately at this place in New Jersey West.
Edù	A tribe of the Lower Californian Guaicuris.
Eeno	An extinct Catawba tribe, South Carolina.
Eelikn̂s	A Thlinkeet tribe south of the Stickeen River.
Ehneks	Or Pehtsiks; a N. Californian tribe on the Salmon River.
Ekklemaches	A tribe of Eslenes, which see.
Ele	Yarura family; on the Casanare and Meta.
Enaghmagh	See Picoris.
Enaguas	An Omagua (Guarani) tribe; on the Guaviari, an Orinoco affluent.
Enakaga	The universal language of the Guaycurus, Paraguay.
Encabellados	"Long-haired," Amazon group; left bank of Middle Napo. The tribal name is Aguaricos.
Engerecmunk	See Botocudos.
Enimagas	See Cochaboths.
Equiniquinaos	A tribe of Guanas, which see.
Eries, or Cat	Algonquin stock; destroyed or expelled from their home about Lake Erie by the Iroquois in 1656. By some thought to have migrated to Carolina, and to be identical with the Catawbas, which see. See also Neutral Nation.
Escorias	Isthmian group; Pacific coast of Panamá.
Eskimos	The hyperborean race skirting the Greenland and N. American shores from Labrador to Alaska. This name, from *eskimantik*=eater of raw fish, was first given by the Algonquins to the Labrador Innuits, and thence applied generally to the whole race. See also Innuit and Karalit.
Eslenes	On Monterey Bay, Central California.
Etchemins	Algonquins? New Brunswick and Maine; see Milicetes.
Ethelenas	A Guana tribe in Paraguay.

Etlas	A tribe of Zapotecs, which see.
Eudeves	In the Chihuahua and Durango mountains; an Opata dialect.
Eurocs	A Klamath tribe on the Lower Klamath, North California.
FALL	The Minetarees; called also Gros Ventres, which see. Under the name of Fall Indians they stretch from the Missouri to the S. Saskatchewan.
Faraones	An Apache tribe.
Flat-bows	See Kootenais.
Flatheads	See Salish.
Folle Avoine	See Menomenee.
Foot Indians	A Fuegian tribe.
Foxes or Outtagaumie	Formerly in Upper Mississippi; Algonquin stock, akin to the Sacs. Some are now in Quapaw Reserve, Indian territory; others in Great Namaha, Nebraska.
Fuegians	The natives of Tierra del Fuego, of whom there are two if not three distinct races, about whom next to nothing is known.
GALIBIOS	Paraná and French Guiana; said by some to be the original stock of the Carib race.
Gaitshim	S. California; akin to the Shoshone family (Oscar Loew).
Gallinomeros	On Russian River, Central California; unclassified.
Garoteros	An Apache tribe.
Garzas	Same as Carrizas, which see.
Gáspé	"Land's End;" the Mikmaks of Gaspé, north of New Brunswick.
Gauchos	Mestizoes of the Pampas; speak Spanish.
Gê, Gêz, Geiko	Also Jahycos; a numerous family in Maranhao and Gran Para; akin to the Timbiras or Crans of Goyaz. Of the Gêz Von Martius mentions nine tribes.
Gens de Bouleau Gens de Milieu	Kutchin tribes on the Yucon, Alaska.
Gherins	In Amada, Brazil; a tribe of Botocudos, which see.
Gileños	An Apache tribe.
Gingaskins	Algonquins, Powhattan group, Accomac branch; Northampton, Virginia; extinct.
Gnapaws	The aborigines of Indian territory; a few still there, settled in the N.W.
Goajira	Isthmian group; Darien.
Gold Harbour	A Hyda tribe, Queen Charlotte Islands; so named by Poole.
Gorgotoquienses	A Peruvian tribe; unclassified.
Goships	A tribe of Bannocks or "Diggers," which see.
Gosh Utes	A mixed tribe of Snakes and Utahs at Gosh Ute Lake and mountains.
Goyogans	See Cayugas.
Goytacas	A Pury tribe formerly in Rio Janeiro.
Greenlanders	See Karalit.
Gros Ventres	See Ahahnelins and Minetarees.

Gros Ventres	Same as Minnetarees, Upper Missouri; akin to the Crows.
Guachichiles	In Zacatecas and S. Luis Potosi, Mexico; unclassified.
Guachikas	The Guasarapos of the first invadors; on the Upper Parana.
Guachiri	A Carib tribe in the Venezuelan Llanos.
Guaicuri	One of the three stock languages of Lower California, between 26° and 23° N. lat.
Guainetas	Isthmian group; Darien.
Guajiqueros	Lenca stock; W. Honduras.
Gualaches	See Guayanas.
Gualaquisas	A band of Jivaros, which see.
Gualalas	On Gualala Creek, Central California.
Gualeas	A Yumbo tribe, Quichua family; Ecuador.
Guanas	A numerous family in Chaco and Paraguay.
Guanacas	In Popayan, New Granada; unclassified.
Guancavalica	An extinct Quito race of sixteen tribes.
Guapaca	In Chiquitos; unclassified.
Guaques	A Carib tribe in New Granada.
Guarani	The largest family in South America; treated under Section xvi. of Appendix.
Guaranos	See Warows.
Guarara	Isthmian group; Panamá.
Guaraunos	A Carib tribe of the Orinoco Delta.
Guarayi	A Guarani tribe, now in the Moxos missions.
Guarives	A Carib tribe on the Venezuelan Llanos.
Guarpes	An Araucanian nation in Cuyo.
Guarus	A Pury tribe formerly in Rio Janeiro.
Guasarapos	See Guachikas.
Guataribos	A Carib or Barré tribe in Guiana.
Guatemaltec	Maya stock; in Suchitepec and Guatemala.
Guatos	An unclassified Brazilian race in Matto Grosso.
Guatusos	Isthmian group; in the N. of Costa Rica; called also Pranzas.
Guayanos	A Carib tribe, whence the name of Guiana; formerly very powerful.
Guayanas Guañanas	An unclassified people in S. Paulo, S. Brazil; called also Gualaches.
Guaycurus	A numerous race on the Paraguay; akin to the Payaguas.
Guazaba	A dialect of the Opata, which see.
Guazapare	A tribe of Tarahumaras, which see
Guazave	In Sinaloa; unclassified.
Guenoas	On the Uruguay; unclassified.
Guentuse	A Guaycuru tribe in Gran Chaco.
Guypunavi	A Maypur tribe on the Upper Orinoco.
HAILTZAS	A Hyda tribe about Millbank Sound, Br. Columbia.
Haitlins	See Teets.
Hambatos	An extinct Quito race.
Hamboyas	An extinct Quito race.
Hamtolops	Now in Chehalis Reserve, Washington.
Han Kutchins	A Kutchin tribe on the Yucon.
Hares	Properly Kawcho; an Athabascan tribe.

Haro	One of the seven Moqui Pueblos, N. Mexico; speak a Tegua dialect. See Moqui and Tegua.
Hauigires . . .	Amazon group; right bank of Middle Napo.
Haynaggis . . .	A Hoopah tribe on Smith River, California.
Herisebocona . .	An unclassified tribe in Moxos.
Hhirichota . . .	Maya stock; in Suchitepec and Guatemala.
Hiabaanas . . .	Tupi stock; valley of the Rio Negro, Brazil.
Hibitos . . .	Amazon group; on the Huallaga.
Himeri . . .	A dialect of the Opata, which see.
Hispano-Chilian . .	A mixture of Spanish and Araucanian spoken about Chiloe; the words are mostly Spanish, and the structure Araucanian.
Hitchittee . . .	A Muscogee nation, belonging to the Creek Confederacy; extinct.
Hochungara . .	"Trout Nation;" the name by which the Winnebagoes call themselves.
Hoha	"Rebels," the Assiniboins; so called by the Sioux, from whom they separated.
Hohs	Now in Quinaielt Reserve, Washington.
Hoodnids . . .	The Thlinkeets of Cross Sound.
Hoodsinoos . . .	The Thlinkeets of Chatham Strait.
Hoonsoltons . .	Hoopah stock; Hoopah Valley, California.
Hoopah . . .	N. Californian; from Lower Trinity River to the South Fork; Athabascan stock.
Horn	The Chipewyans of Horn Mountain.
Howtetéoh . . .	N. Californian; Rogue's River.
Hualpais . . .	A Yuma tribe near Bill Williams Fork, Arizona.
Huamares . . .	In Zacatecas and S. Luis Potosi, Mexico; unclassified.
Huambisos . . .	Amazon group; on the Santiago, in Oriente, Ecuador.
Huancas . . .	One of the three primitive races of Peru before the Incas, between 9° and 14° S. lat.
Huastecs . . .	In Vera Cruz and Tamaulipas, Mexico; Maya stock.
Huaves . . .	On the Gulf of Tehuantepec, Mexico.
Huebo . . .	A sub-tribe of the Cocamas, which see.
Huecos . . .	See Waccoes.
Hueshuos . . .	A Matagwayi band in Gran Chaco.
Huilliches . . .	Same as Puenches, which see.
Huitcole . . .	In Zacatecas, Mexico.
Huite	In Sinaloa and Sonora; unclassified.
Humboldts . . .	Hoopah stock; Hoopah Valley, California.
Hume . . .	A tribe of the Acaxees, which see.
Hurons . . .	See Wyandots.
Huskies . . .	A corruption of Eskimo; so called by the whites of Hudson's Bay.
Hydas. . . .	A Columbian race occupying Queen Charlotte Islands and opposite coast. The term was first used in a collective sense by Fr. Poole, but by him applied to the islanders only.
Hypurina . . .	Amazon group; on the Chiwené, an affluent of the Purus; one of the few Brazilian tribes that have been evangelised by Protestant missionaries.
Idibas. . . .	Isthmian group; Darien.
Ika	A tribe of the Cochimis, which see.

Illinois	Algonquin stock, formerly on the Illinois river; extinct.
Imbabureños	A Quito tribe; Quichua family.
Imatos	A Matagwayi band in Gran Chaco.
Inacos	Lenca stock; Honduras, 15° N. lat., 85° W. long.
Inca	The secret language of the first Incas, probably an Aymara dialect, the Incas having been most likely of Aymara origin. But if they came from the coast, this may have been a Chinchasuyu, and if from the east, a Chalchaqui idiom. A few words are said to have been preserved.
Ingaliks	The Kenais of the Lower Yucon, Alaska.
Inganos	New Granada; unclassified.
Innuit	"People," from *inuk*=man, the proper name of the Labrador Eskimos. The rest of mankind are *Kablunât*=inferior beings.
Intags	A Yumbo tribe, Quichua family; Ecuador.
Intibucat	Lenca stock; Honduras.
Ionies Inies	Texas; Brazos River, below Fort Belknap; akin to the Caddos.
Iowas	Dacotah stock; call themselves Pa-hu-cha, Pa-ho-ja =Dusty-nose; now in Great Nemaha, Nebraska.
Ipapana	A tribe of Huastecs, which see.
Ipas	A Vilela tribe on the Upper Salado.
Iquitos	See Yquitos.
Iregas	A primeval race on S. Atlantic coast of the United States, the faint traditions regarding whom have long died away.
Iroquois	Or Ongwehonwe family; treated in Sec. iv. of Appendix, p. 468.
Irritiles	In Bolson de Mapimi, Mexico; extinct.
Isaunties	The generic name of several Dacotah bands.
Isitine	A Lule tribe, Gran Chaco.
Isleta	New Mexico; akin to Jemez, which see.
Itazipcoes	A band of Teeton Dacotahs.
Itenes	An unclassified tribe in Moxos.
Itonomas	An unclassified tribe in Moxos.
Itzas	N. of Lake Peten, Yucatan; Maya stock.
Ixil	Maya stock; Guatemala.
JALLIQUAMAI	S. Arizona and Sonora; unclassified.
Jananays	Amazon group; on the Teffé.
Jandia-tubas	Amazon group; on the Içá and Solimoens, back of San Paulo.
Jemez	One of the five stock languages of the N. Mexican pueblos; spoken apparently by the Jemez and Pecos only.
Jeveros	Amazon group; on the Huallaga and Aypéne.
Jirarillos	An Apache tribe.
Jivaros	Amazon group; the collective name of the wild tribes in the province of Oriente, Ecuador.
Jovas	In the Chihuahua and Durango highlands; an Opata dialect.
Juberys	Amazon group; on the Purus.

Jugelnuts	A Kenai tribe, Alaska.
Juiadge	The Lenguas of Spanish writers, formerly between the Pilcomayo and Paraguay; apparently extinct.
Julime.	In the Bolson de Mapini, Mexico; unclassified.
Jumagos	Isthmian group; Pacific coast of Darien.
Jummas	Amazon group; on the Teffé.
Junakachotonas	A Kenai tribe, Alaska.
Junmas	Amazon group; on the Xingu.
Juris	Amazon group; on the Teffé and Içа.
Juris	A Barré tribe in Guiana; also a Tupi tribe on the Rio Negro.
KACHIQUEL	Maya stock; in Solola, Guatemala.
Kadiaks	The Kadiak islanders, whose proper name is Koniaga, which see.
Kahmiltpahs	Now in Yakama Reserve, Washington.
Kaiganies	A Hyda tribe, Prince of Wales Archipelago.
Kaipotorade	In Chiquitos; unclassified.
Kakas	A Thlinkeet tribe S. of the Auks and Takoos, which see.
Kalalit	See Karalit.
Kalispelms	A Salish tribe; called also Ponderas (Pend d'Oreilles), about the lake of same name and the Clarke River.
Kanchis	An Aymara tribe; Bolivia.
Kangjulits	See Kuskoquigmutes.
Kangmialis	The Eskimos between the Mackenzie and Barton Reef.
Kansas	Dacotah stock; Winnebago branch; now in Kansas Reserve, Indian territory.
Karaikas	A Fuegian tribe; spoken of by the old writers.
Karalit	The proper name of the Greenland Eskimos.
Karankas	An Aymara tribe; Bolivia.
Kariff	Bay of Honduras; Lenca stock?
Kasiguas	About the source of the Uruguay; unclassified.
Kaskasias	Algonquin, Illinois branch, Illinois; now in Quapaw Reserve, Indian territory.
Kasnas	An Aymara tribe; Bolivia.
Kauvuya	S. California; akin to the Shoshone (Oscar Loew).
Kaviaks	The Koniaga Eskimos near Norton Sound.
Kawcho	See Hares.
Kaws	See Kansas.
Keawahs	In Tule River Reserve, California.
Kebiks	Algonquin stock; extinct, but the name survives in "Quebec."
Kechi	At S. Juan Capistrano, S. California; Shoshone stock; akin to Netela and Kizh, which see.
Keechies or Kichais	Texas (1851); a subdivision of the Pawnee nation; now in Wichita Reserve, Indian territory.
Kemenetes	A Fuegian tribe mentioned by some early writers.
Kenai or Thnaina	An Alaska group of the Athabasca family. Wrongly treated as independent by Fr. Müller and others, Buschmann having clearly shown its affinity to the Tinney. Stretch from the Yucon to the Coppermine River.
Kennekas	A Fuegian tribe mentioned by the old writers.

Keres	See Queres.
Keswhahay	See Queres.
Kettle-band	A tribe of Teeton Dacotahs.
Keyataigmutes	The Koniaga Eskimos of Cape Newenham.
Key-yus or Keyes	A Vuta-Huilliche tribe between 52° S. lat. and the Straits of Magellan.
Kickapoos	Algonquin stock; formerly in Missouri, now in Sac and Fox Reserve, Indian territory.
Kiddan	A Hyda tribe, Queen Charlotte Islands.
Kikastas	The Upsarokas, or Crows proper, which see.
Killamooks	A Chinook (Columbian) tribe, between the Cascade Range and the ocean.
Kinklas	A Klamath tribe, between the Sacramento and the coast, 41° N. lat.
Kiowas	Now mostly in Kiowa Reserve, Indian territory; seem to be of the Shoshone stock.
Kiriri, Cariri, Kirikirisgotos, Kirikiripas	An unclassified Brazilian race in Bahia; akin to the Sabuja.
Kiskapocoke	A Carib tribe on the Venezuelan Llanos.
Kitegarutes	See Kickapoos.
Kitkahoets, Kitkä	The Eskimos of the Mackenzie River.
Kizh	A tribe of Pawnees, which see.
Klallums	At S. Gabriel and S. Fernando Rey, S. California; Shoshone stock. See also Diegueños.
Klallums	Nootka group; in the S. of Vancouver.
Klamath	Puget Sound (Columbian) tribe; between the Sound and the Pacific.
Kliketats	The generic name of all the N. Californian races as far south as the Eel River. The Klamaths proper, or Lutuami, are on the head waters of the Klamath.
Klinquits	A Sahaptin (Columbian) tribe near Mount Adams; now mostly in Yakama Reserve, Washington.
Klistinos	In Yakama Reserve, Washington.
Klue	See Kree.
Knistineaux	A Hyda tribe, Queen Charlotte Islands.
Kollaguas	See Kree.
Koloshes	An Aymara tribe; Bolivia.
Koltshanes	See Thlinkeets.
Komux	The Kenais of the Kuskoquim River, Alaska.
Koniagas	Nootka group; east coast of Vancouver.
Kootenais	The generic name of the Southern Eskimos from Kotzebue Sound to Kadiak.
Kowitchans	Or Flatbrows, also Skalzi, a Shushwap (Columbian) tribe on the Kootanie river and lake, about 49° N. lat.
Kowwasayes	Nootka group; S.E. coast of Vancouver; called also Thongeiths and Ucletes.
Kree, Krî	In Yakama Reserve, Washington.
	The largest branch of the Algonquin stock; between lakes Winnipeg and Athabasca N. and S., and between Hudson Bay and the Rocky Mountains E. and W.

Kuevas	See Cuebas.
Kukuth	See Yukuth.
Kula-Napo	N. Californian; one of the Clear Lake bands. Their idiom is spoken by all the tribes now or formerly occupying the large valley.
Kupeno	A Moxos dialect; in the S. Xaverio Mission, Moxos.
Kuskoquigmutes	The Koniaga Eskimos of the Kuskoquim River.
Kutcha Kutchin	A Kutchin tribe on the Yucon.
Kutchin	A branch of the Tinneys, mainly on the Yucon and its affluents, and thence to the Mackenzie; called also Loucheaux and Deguthee Dinees. The term means "people."
Kwantlums	Nootka group; on the Lower Fraser.
Kwichluagmutes	The Koniaga Eskimos of the Kwichluak River.
Kwichpagmutes	The Koniaga Eskimos of the Kwichpak River.
LACANDONES	In Yucatan and Guatemala, as far S. as the 16° N. lat. The eastern Lacandones are called Acalans, the Western, Mayos.
Lamas	Near Sanel, Central California; unclassified.
Lamissa	See Chimu.
Lapuna	An extinct Quito race.
Lassics	A Hoopah tribe on Mad River, California.
Latacunga	An extinct Quito race.
Layanas	A tribe of Guanas, which see.
Laymon	A tribe of the Cochimis, which see.
Lemano	Same as Lamissa or Chimu, which see.
Lenca	A numerous family, mainly in Central Honduras and on the Mosquito Coast.
Lenguas	See Juiadge.
Leni-Lennape	"Men of men;" Algonquin stock; the Delawares of early writers. Now in Kiowa and Wichita Agencies, Indian territory.
Lepans Lipans	An Apache tribe in Texas.
Little Lakes	In Round Valley, California.
Liyùe	A tribe of the Lower Californian Guaicuris.
Llaneros	An Apache tribe.
Llipes	Same as Olipes or Atacameños, which see.
Lokono	"People;" the native name of the Arawaks, which see.
Long Island	See Metoacs.
Lopillamillos	Formerly on San Francisco Bay.
Lototen	A Klamath tribe on the Rogue River, N. California.
Loucheux	Or "Quarrellers," the Kutchins W. of the Mackenzie. Others explain the term to mean "Squinters."
Luckamutes	Now in Grande Ronde, Oregon; nearly extinct.
Lucumbis	An extinct Quito race.
Lule	A large nation in Gran Chaco; akin to the Vilela.
Lummi	A Puget Sound (Columbian) tribe.
Lupakas	A Bolivian tribe, said to speak the purest Aymara dialect.
Lutuami	See Klamath.

Maca	An extinct Quito race.
Machacaris	A Camacan tribe, near Porto Seguro, coast of Brazil.
Machicuy	A numerous nation on the Pilcomayo; probably akin to the Lule.
Macos or Piaros	A Salivi tribe on the Catanaipo, New Granada.
Maconis	A Camacan tribe, Bahia.
Macoyahui	In Sonora and Sinaloa; unclassified.
Macus	Amazon group; on the Negro, near Victoria.
Macusi	A Carib tribe in Venezuela.
Macuxis	Amazon group; on the River Blanco, a tributary of the Negro.
Magach	An extinct Payagua tribe, Paraguay.
Maiongkong	A Carib tribe in Venezuela.
Maitanos	A Tamanac (Carib) tribe on the right bank of the Lower Orinoco.
Majeronas	Amazon group; on west bank of Javari.
Majeronas	Amazon group; on the Ucayali, up the Tapichy.
Makahs Macaw	Same as Classets, which see.
Makiretaris	A Carib tribe in Venezuela.
Malabas	In Esmeralda, New Granada; unclassified.
Malali	A Camacan tribe, Bahia.
Malemutes	The Koniaga Eskimos of Norton Sound.
Mam; Mame	Maya stock; in Guatemala.
Manaches	In Tule River Reserve, Washington.
Manaos	Tupi stock; valley of the Rio Negro, Brazil.
Manches	S. of Lake Peten; akin to the Lacandones, Guatemala.
Mandans (Wahtani)	Perhaps akin to the Crows; on the Missouri, between Hart and Knife Rivers (1829); speech has little affinity with any other. Are said to have grey hair and blue or brown eyes. Morgan regards them as Dacotahs.
Mandaucas	A Carib or Barré tribe in Guiana.
Mandingos	Isthmian group; Atlantic coast of Costa Rica.
Manetenerys	Amazon group; on the Purus.
Manetopas	An Assiniboin tribe, Dacotah stock. Hence Manitoba.
Mangaches	Amazon group, in Palenque Alto.
Manhattan	"Whirlpool," Algonquin stock, Manhattan; extinct.
Mansos	Amazon group; on the Xingu.
Manta	An extinct Quito race of ten tribes.
Mantopanatos	Dacotah stock; Assiniboin branch.
Manzanillos	Or San Blas; Isthmian group; Atlantic coast of Costa Rica.
Maopityans	Sierra Acarai; 56°-58° W. long., 2°-3° N. lat.
Mapicopas	In Maricopa Reserve, Arizona.
Maqua	Iroquois stock, E. Pennsylvania and W. New York; extinct. The name has sometimes been applied to the Onondagas.
Marauas	Amazon group; on the Jutahi.
Maria-thé	Amazon group; on the Japura.
Mariscopa Maricopa	On the Lower Gila, Arizona; speech akin to Yuma.
Maropas	Amazon group; on the Beni, a tributary of the Madeira.

Marubos	Amazon group ; on the Javari (east bank)
Mary's River	In Grande Ronde, Oregon ; nearly extinct.
Marÿ-phÿ	Amazon group ; on the Japura.
Masacas	A Carib or Barré tribe in Guiana.
Mascotins	Algonquin ; Michigamie group ; have disappeared.
Maskigos	See Nopemings.
Massachusetts	See Natic.
Massawamacs	The Iroquois ; so called by the Algonquins.
Massawomes	Formerly powerful in Kentucky ; extinct.
Massets	A Hyda tribe, Queen Charlotte Islands.
Masteles	In Popayan, New Granada ; unclassified.
Mataganes	A band of Zaparas, which see.
Matagwayi	A numerous people in Gran Chaco; probably akin to the Lule.
Matakos	A Matagwayi band in Gran Chaco.
Mataras	See Tonocote.
Matlalzincas	N. of Anahuac, Mexico, between the Tarascos and the Aztecs. One of the civilised nations of Mexico.
Mattaponies	Algonquin stock ; Powhattan group, Virginia ; extinct.
Mattasoons	Akin to the Crows; called also Ahahaways. In 1805 on the Missouri above the Mandans.
Mauhés	Amazon group ; on west bank of the Tapajos.
Mautas	A tribe of the Zaparas, which see.
Mautanos	Amazon group ; right bank of Middle Napo.
Mauthaepi	A Montagnais tribe, now in Manicongan Reserve in the King's Posts.
Mawakwas	A Carib tribe in Venezuela.
Maya	The Yucatan branch of the Maya-Quiché family, which see. Of this family Maya is the stock language. It has spread northwards as far as the present province of Vera Cruz, and southwards to Honduras.
Maya-Quiché	The civilised race in Central America ; mainly in Yucatan, Guatemala, and Honduras. See Maya and Quiché.
Mayacomas	In Napa Valley, Central California.
Mayo	See Lacandones.
Mayos	A Cahita or Sinaloa nation mainly on the Mayo ; see Cahita.
Mayorunas	In Ecuador ; unclassified.
Maypurs	A wide-spread Barré tribe along the Upper and Middle Orinoco.
Mazahua	A principal variety of the Otomi, which see.
Mazanes	Amazon group ; akin to the Avijeras ; Lower Napo.
Mazapile	In Zacatecas, Mexico.
Mazatecs	In N. Oajaca, Mexico ; a Miztec dialect.
Mbaya	An extinct Guaycuru language, on the Paraguay.
Mecos	In Guanaxuato ; called also "Serranos."
Medawakantons Mediwanktons	A band of the Isaunties, a Dacotah tribe.
Mehethawas	Algonquin stock, Kree branch.
Melchora	Lenca stock, Nicaragua, N. of the Rio San Juan, 84° W. long.

Meniengs	An extinct Camacan tribe; formerly near Porto Seguro, E. Brazil.
Menomeni	The Folle Avoine or "Wild Oats" of French writers; Algonquin stock; now in Green Bay Reserve, Wisconsin.
Mequachake	Algonquin stock; extinct; akin to the Lennapes.
Mescaleros	An Apache tribe.
Messessagues	See Mississaugies.
Metagwaya	See Matagwayi.
Metahartas	The Minetarees of the Willows; speech the same as the Minetaree.
Metchigamias	Algonquin, Illinois branch; near Fort Chartres in 1736; extinct?
Meterries	Most probably Monacans, which see. See also Tutelos.
Metoacs, Montauks	Algonquin stock, Long Island; extinct.
Mexican	See Nahua and Aztec.
Miamis	Algonquin stock; now mostly in Quapaw Reserve, Indian territory.
Michigamics	Algonquin tribe; originally on the shores of Lake Michigan, which takes its name from them. Most of them have disappeared.
Mictlantantongo	A tribe of Miztecs, which see.
Mijes	In the centre of Oajaca, Mexico.
Mikmaks	Algonquin stock; Nova Scotia, New Brunswick, Lower Canada.
Milcocayac	An Araucanian idiom spoken by the Guarpes of Cuyo.
Milicetes, Amilicites	The Etchemons of Champlain (1604); St. John's River, New Brunswick; usually grouped with the Algonquins, but in Schoolcraft, vol. v., positively declared to be Iroquois.
Mimbreños	An Apache tribe.
Minetarees	Or Gros Ventres; the Fall Indians of the Hudson Bay traders; also Paunch; akin to the Crows, which see. Morgan groups them with the Dacotah family.
Minhas	Amazon group; on the Japura.
Miniamis	See Menomenis.
Minikanyes, Minikongshas	A band of Teeton Dacotahs.
Minowa Kantongs	A band of Teeton Dacotahs.
Minsis	Algonquin stock; akin to the Lennape; extinct.
Minuanes	Between the Uruguay and Parana; allied to but distinct from the Charruas.
Mipacmas	On Clear Lake, Central California.
Miramichi	Algonquin stock, Mikmak branch, New Brunswick; extinct.
Miranhas	Amazon group; on the Japura, at the rapids.
Miscolts	In Hoopah Valley, California.
Miscotins	Algonquin stock; akin to the Kickapoos, which see.
Missiassiks	Algonquin stock, New England; extinct.
Mississaugies	Algonquin stock, but incorporated with the Iroquois in 1746; about Lakes Huron and Superior.
Missouris, Missourias	Dacotah stock; now in Otoe Reserve, Nebraska.

Mistassini	A Nasquapee tribe, Labrador.
Miztecs	One of the civilised Mexican races in Miztecapan, West Oajaca; still represented by numerous tribes in Oajaca, Puebla, and Guerrero.
Mobile	Appalachian stock, akin to the Chickasaws, formerly very powerful on the coast of Florida; name still survives in Mobile at mouth of the Alabama.
Mobimas, Movimas	Amazon group; on the Mamoré, a tributary of the Madeira; in Moxos.
Mocha	An extinct Quito race.
Mocoas	Ecuador; on the Mocoa, a head stream of the Yapura.
Mocoa	An extinct Quito race; in Popayan, New Granada.
Mochono, Muchojéone	A Moxos dialect in the S. Xaverio Mission, Moxos.
Mocobi, Mbocobi	A large family in Gran Chaco; the Mocobi proper are on the Vermejo.
Mocoritos	In Sonora and Sinaloa; unclassified.
Modocs	Some in Quapaw Reserve, Indian Territory; others in Klamath Reserve, Oregon.
Mohawks	Or Wabingi; the founders of the Iroquois Confederacy; on Mohawk river, N. York; extinct, but see Two Mountain.
Mohegans, Mohicans	Algonquin stock; Connecticut, and the Hudson between Esopus and Albany. Their three tribes were the Muchquanh or Bears, Mechchaooh or Wolves, and Toonpaooh or Turtles; all extinct.
Mojave	Yuma stock; on the Colorado in Mojave Valley.
Mojos	Amazon group; on the Mamoré, a tributary of the Madeira.
Mollale	A Sahaptin (Columbian) tribe in the Blue Mountains.
Mollalas, Molels	In Grande Ronde, Oregon; nearly extinct.
Moluches	Same as Araucanian, which see.
Monacans	Iroquois stock, mainly on the head waters of the Virginia rivers.
Mongoyos	A Camacan tribe, Bahia.
Monoyos de Passanha	A Camacan tribe in Porto Seguro, coast of Brazil.
Monqui	A tribe of the Lower Californian Guaicuries.
Monsonics	Algonquin stock, Kree branch.
Montagnais	Or Ne-e-no-il-no = perfect men; Algonquin stock, Kree branch; Labrador, formerly extended from about Quebec to Cape Whittle.
Mont Pelés	See Oumamiawek.
Mopan	See Manche.
Moqui	A nation of seven pueblos or towns in E. Arizona and New Mexico; all but one speak a language now shown to be akin to the Shoshone. The exception is Haro, which see.
Moronas	A Jivaro band, Ecuador.
Morotocos	An unclassified tribe in Chiquitos.
Mosotie	A Moxos dialect in the S. Xaverio Mission, Moxos.
Moscos	Lenca stock; S. and W. of the Lecos, which see.
Mosquitos	*i.e.* "Little Moscos;" Lenca stock; on the Mosquito Coast.

Motilone	Isthmian group ; Darien.
Mowill	See Mobile.
Moxos	A Barré nation in Moxos, Bolivia ; akin to the Maypurs.
Muckleshoots	In Reserve of like name, Washington.
Mueganos	A band of Zaparas, which see.
Muiscas	See Chibchas.
Mukkundwas	Or "Pillagers ; ' Algonquin ; originally in the large islands of Lake Superior, now about the head waters of the Red River of the north.
Mundrucus (Muturicus)	Amazon group ; the most powerful tribe in the Amazon basin ; along the west bank of the Tapajos, beyond first cataract.
Munsees	Algonquin stock, Illinois group ; now in Munsee Reserve, Wisconsin.
Muras	Amazon group ; on the Madeira, Purus.
Muratos	Amazon group ; between the Pastassa and Morona.
Mure	An unclassified tribe in Moxos.
Muscogulges / Muscogees	Or Creeks, the principal nation of the Creek Confederacy ; originally in Alabama and Florida, now in Indian Territory Reserve.
Musconongs	Algonquin stock, Chippeway branch ; Upper Canada.
Mustegans	A Kree or Nasquapee tribe between Lake Mistassinni and Hudson Bay.
Muutzicat	A dialect of the Jalisco Cora, which see.
Muzos	Formerly of New Granada ; unclassified.
Mynckussars	Iroquois stock, Delaware and New Jersey ; extinct.
NABEDACHES	Red River, Texas ; akin to the Caddoes.
Nabiltse	N. Californian ; Rogue's River ?
Nachees	An extinct Catawba tribe, S. Carolina.
Nagailer	Same as the Tacullies or Carriers ; so called by Mackenzie.
Naggeuktormutes	"Deer-horns;" the Eskimos of the Coppermine River.
Nagrandan	Lenca family, Honduras.
Nahua / Nahuatlacs	The oldest and most generic name of the Aztecs or Mexicans proper, which see.
Namaoskeags	Algonquins ; originally at the Amoskeag falls of the Merrimack, now within Manchester City, Mass.
Nambe	A new Mexican Pueblo ; speaks Tegua, which see.
Nambiguaras	Amazon group ; on the Topajos.
Nandakoes	Texas ; akin to the Caddoes.
Nanegales	A Yumbo tribe, Quichua family ; Ecuador.
Nanticokes	Algonquins ; originally between the Delawares and Powhattans.
Naolingo	See Tahinolo.
Napas	In Napa Valley, North California ; they include the Myacomas, Calayomanes, Caymus, Ulucas, and Suscols.
Napos	Quichua group ; on the Napo above Coca, one of the principal tribes in Ecuador ; are a subdivision of the Yumbos, which see.
Naquiñoñeis	See Chiquitos.
Narcotah	Same as Dacotah, which see.

Narragansets	Algonquin stock ; originally about Narraganset Bay ; extinct ; called also Wampanoags
Nashuas	Algonquins ; about the Nashua and Lower Merrimack rivers.
Naskotins	A tribe of the Tacullies, which see.
Nasquapees	Algonquin stock, Kree branch ; interior of Labrador.
Nass	A Hyda (Columbian) tribe on the river Nass.
Nata	Isthmian group ; Panamá.
Natacooks, Nacooks	See Saugehans.
Natages	An Apache tribe.
Natche	The Kutchins near Porcupine River.
Natchez	Muscogees confederacy, but originally of different speech. They were the Chigantualaga of de Soto, and were called also "Sunset."
Natchitoches	Originally a Louisiana tribe, S. of Red River, unclassified.
Natic	The Algonquins of Massachusetts ; extinct, but their language survives in Eliot's famous version of the Bible.
Natliautins	A tribe of the Tacullies, which see.
Nauas	Amazon group ; on the Jurua.
Nauticokes	See Stockbridge.
Navajos	Or "Tenuai"=men, another form of Tinney. Athabascan stock, akin to the Apaches ; mainly about the Rio and Sierra de los Mimbres ; formerly very powerful.
Nayaguas	Same as Payaguas, which see.
Necariages	Huron stock of Michillimacinac ; received into the Iroquois Confederacy in 1723 ; extinct.
Ne-e-no-il-no	See Montagnais.
Nehalims, Coast	In Grande Ronde, Oregon ; nearly extinct.
Nehannes	See Atnahs.
Nenawehks	Algonquin stock, Kree branch.
Nepesangs	Algonquin stock ; about Lake Nipissing.
Nepicinquis or Nepissings	Algonquins ; Ottowa river, Two Mountain Lake.
Nespectums	In Fort Colville Reserve, Washington.
Nestucalips	In Grande Ronde, Oregon.
Netela	Akin to Kechi, which see ; see also Diegueños and Kizh.
Netzichos	A tribe of Zapotecs, which see.
Neutral Nation	So called because they stood aloof in the struggle between the Iroquois and Hurons. Occupied both sides of the Niagara River, but have since disappeared. Identified by some with the Eries, which see. By the Hurons they were called Attiwandaronk.
Neutubirg	Puget Sound (Columbian) tribe ; in Whitney's Island.
Newicarguts	A Kutchin tribe on the Yucon.
Newichewannocks	Algonquins ; originally on river of same name, Maine ; subject to the Pennacooks ; extinct.
Nextucas	In Grande Ronde, Oregon ; nearly extinct.
Nez-Percés	See Sahaptin.

Nicaraguans	Nearly pure Aztecs ; originally between Lake Nicaragua and the coast.
Nicariagas, Necariages	A Huron tribe, from Michillimacinac, which joined the Iroquois Confederacy in 1723 ; extinct.
Nicoyas	Isthmian group ; Costa Rica.
Nicute-much	By the Canadians corrupted into Couteaux ; a Shushwap tribe, by some called Shewhapmuch, which see.
Nievas	In Popayan, New Granada ; unclassified.
Niguecactemic	A tribe of Guanas, which see.
Nikozliautins	A tribe of the Tacullies, which see.
Ninaquiguilas	The collective name of several tribes in the forests between Gran Chaco and Chiquitos.
Ningre Tongo	See Bakra.
Ninstence	A Hyda tribe at C. St. James, Q. Charlotte Islands.
Nio	In Sinaloa and Sonora ; unclassified.
Nipegons	Same as Winnebagoes, which see.
Nipmucks	"Fresh-Water ;" the generic name of several inland Algonquin tribes originally occupying the interior of Maine.
Niquirans	See Nicaraguans.
Nisqually	A Puget Sound (Columbian) nation, with many subtribes whose names end mostly in *mish*, and will thus be recognised without requiring to be indexed.
Nitinahts	A tribe of Ahts, S. of Barclay Sound, Vancouver. See Aht.
Niyunas	See Comanches.
Noannamaes	In Popayan, New Granada ; unclassified.
Noche	S. Arizona and Sonora ; unclassified.
Nochitzlan	A tribe of Miztecs, which see.
Nooksaks	A Puget Sound (Columbian) tribe.
Nootkas	The conventional generic name of all the tribes in Vancouver and opposite coast, many of whom speak totally different languages.
Nopemings	Algonquin stock, Chippeway branch.
Norridgewocks, Narantsouak, Nottoways, Nadowas	Algonquin ; a sub-tribe of the Abenakis ; withdrew to Lower Canada in 1754. See Abenaki.
Ntshaautins	A tribe of the Tacullies, which see.
Nuclukayettes	A Kutchin tribe on the Yucon.
Nulaautins	A tribe of the Tacullies, which see.
Nunatangmutes	The Eskimos of Kotzebue Sound.
Nushinos	A tribe of Zaparas, which see.
Nuwungmutes	The Eskimos at Point Barrow.
Oakmulgies	Appalachian stock ; absorbed by the Muscogees.
Ochagras	Same as Winnebagoes, which see.
Ochecholes	In Yakama Reserve, Washington.
Ochecumne	On E. bank of the Sacramento, California.
Ochessigirinioock	An extinct Montagnais tribe on river Godbout.
Ochestgooetch	An extinct Montagnais tribe near L. Manicouagan.
Ocoles	A Vilela tribe on the Vermejo.
Oconies	Appalachian stock ; destroyed by the Muscogees.

Ocoroni	In Sinaloa and Sonora; unclassified.
Ocotlan	A tribe of Zapotecs, which see.
Oculltec	In Toluca, Mexico.
Odahwahs	See Ottowas.
Ogallahs, Ogallalahs	A band of Teetons (Dacotahs).
Ohenonpas	A band of Teeton Dacotahs.
Ohuero	In Sonora; unclassified.
Oje	A tribe of Tamanacs, which see.
Ojibway, Ojibwa	See Chippeway.
Okanagans	A Shushwap (Columbian) tribe on the lake and river of like name.
Olanche	Lenca stock; Honduras, 14° N. lat., 86° W. long.
Olhones	Formerly on San Francisco Bay.
Olipes	See Atacameños.
Olive	In Tamaulipas, Mexico; unclassified.
Omagua	The N.W. branch of the Guarani family; the Omaguas proper on the Amazon and its affluent the Yapura.
Omahas, Mahas	Dacotah stock, Winnebago branch; akin to the Punkas; now in Omaha Reserve, Nebraska.
Oncidas	In Oneida Reserves, New York and Wisconsin.
Oneidas	One of the Iroquois nations, New York; extinct? See Two Mountain.
Ongue-honwe	"Superior Men;" a name by which the Iroquois call themselves (Colden).
Oniouts	The Oneidas of French writers.
Onondagos	One of the Iroquois nations; now partly in Alleghany, Catteranga, and Onondago Reserves, New York, and partly in Grande Ronde, Oregon.
Onontchataronon	The Huron name of the agricultural Algonquin tribe settled at Hochelaga, the present Montreal, when visited by Cartier in 1535; extinct.
Ontoampas	A Vilela tribe on the Upper Salado.
Oofé-ogoolas	A Chickasaw tribe, Appalachian stock.
Opatas	In the Chihuahua and Durango highlands, between Upper and Lower Pima; akin to the "Aztec-Sonora" languages.
Opatoro	Lenca stock; Honduras.
Openangos	Same as Passamaquoddies, which see.
Ore	In Sinaloa and Sonora; unclassified.
Orehbe	See Haro.
Orejones	"Big Ears;" Amazon group; on the Ambryacu and Lower Napo.
Orejones	See Cacocys.
Oristine	A Lule tribe, Gran Chaco.
Orotiñas	See Nagrandan.
Osages	Originally of Arkansas; Dacotah stock, Winnebago branch; eight tribes, all now settled in Osage Reserve, Indian territory.
Oseegahs	Dacotah stock; Assiniboin branch.
Ossipees	Algonquins; originally in Carroll Co., New Hampshire and York Co., Maine; extinct.
Otamacs	In Venezuela, towards the New Granada frontier; unclassified.

Otavolo	An extinct Quito race.
Otoes	Dacotah stock, Winnebago branch; now in Otoe Reserve, Nebraska.
Otomi	In the mountains enclosing the Valley of Mexico; formerly the most widely diffused language in Mexico next to the Aztec; spoken in two main varieties, Otomi proper and Mazahua.
Ottowas	Algonquin stock; about the Ottowa River; now settled partly on Manitoulin island, Lake Huron, partly in Quapaw Reserve, Indian territory, and Michigan on Lake Superior.
Otuki, Otuqui	In Chiquitos; now speak Quichua.
Oumamiawek	A Montagnais tribe, visited by Pere J. de Quest in 1652; same as the Mont Pelés and Bersiamites, a Montagnais tribe about the Bersiamite river, left bank of the St. Lawrence; extinct.
Owen Rivers	In Tule River Reserve, California.
Oyampis	A Carib tribe in French Guiana.
Oyapoks	A Carib tribe in Venezuela.
PACAGUARA	An unclassified tribe in Moxos.
Pacamores	An extinct Quito race of twelve tribes.
Pacanas	Appalachian stock, absorbed by the Creeks.
Pachanchicas	In Popayan, New Granada; unclassified.
Pachera	A tribe of Tarahumaras, which see.
Paducas	The Comanches; so called by the Pawnees, Osages, and others. Undue importance has been given to this term by some ethnologists.
Paes	In Popayan, New Granada; unclassified.
Pahayaguas	Amazon group; left bank of Middle Napo.
Pahojas	Same as Iowas, which see. Others make them a sub-tribe of the Otoes.
Pah-Utahs	Or Pintes; the Utahs of W. and Central Nevada, and parts of S.E. California and of Arizona.
Pah-Vants	A Utah tribe near Sevier Lake, W. Utah.
Paioconeca	An unclassified tribe in Chiquitos.
Paiure	A tribe of Tamanacs, which see.
Pakases	An Aymara tribe, Bolivia.
Palaiks	A Klamath tribe near Mount Shasta
Palenques, Palencas	A Carib tribe formerly in Cumana, Venezuela.
Palouse	A Sahaptin (Columbian) tribe N. of the Snake, about the mouth of the Palouse; now in Yakama Reserve, Washington.
Palta	An extinct Quito race.
Paluxies	See Bolixes.
Pamanas	Amazon group; on the Purus.
Pames	In Queretaro, Mexico.
Pammarys	Amazon group; on the Purus.
Pammas	On the Madeira in Matto Grosso, unclassified; said to be almost white.
Pampas	See Puelche.
Pamticoes	Algonquins; N. Carolina; they mark the extreme

	southern limit of the Algonquin stock in historic times; extinct.
Pamunkies	Algonquin stock, Powhattan group, Virginia; extinct. With the Pamunkies the Powhatten language died out.
Panamá	Isthmian group; Panamá.
Panamekas	Lenca group; on Blewfields Lagoon, Nicaragua.
Pani	Red River, Texas; akin to the Towiacks, and possibly to the Pawnees.
Pan-nacks	See Bonnacks.
Panos	Amazon group; formerly on the Upper Ucayali; now extinct. But their language, said to be the most difficult of all the Indian idioms, still survives as the general means of communication, a sort of *Lingoa Geral*, on the Lower Ucayali. Latterly, however, it is being supplanted by a corrupt Quichua dialect.
Panticoughs, Panticoes	N. Carolina; the southernmost of all the Algonquin tribes; extinct.
Papagos	On the Lower Gila, Arizona; speech akin to Pima.
Papinachiois	A Montagnais tribe now in Manicougan Reserve, left bank of the St. Lawrence.
Paráuauátes	Amazon group; on the Xingu.
Parechi	A tribe of Tamanacs, which see.
Parenis	A Barré tribe in the Maypur Mission on the Mataveni.
Parentintins	Amazon group; on the Madeira.
Parexis	Amazon group; on the Tapajos; one of the eight Brazilian linguistic groups, according to the arrangement of Von Martins.
Pariagotos	A Carib tribe formerly in Cumana, Venezuela.
Paris	Isthmian group; Pacific coast of Panamá.
Pasaine	A Vilela tribe on the Upper Salado.
Pascagolas, Pascogoulas	Appalachian stock, akin to the Mobiles; formerly in Louisiana; extinct.
Pashtolits	The Koniaga Eskimos of the Pashtolik river.
Pasimonari	A Carib or Barré tribe in Guiana.
Passamaquoddies	Algonquin stock; E. Maine. Some still there in 1825, but since extinct.
Passés	Amazon group; on the Teffé and Içá.
Pastassas	A band of Jivaros, which see.
Patachos	A Camacan tribe in Porto Seguro, coast of Brazil.
Patagonians	See Tehuelches.
Pataways	A Klamath tribe on the N. California coast; called also Weitspek.
Patcheenas	Nootka group; in the south of Vancouver.
Pautes	A tribe of Jivaros, which see.
Paunch	Same as Gros Ventres and Minetarees, which see.
Paumonasis	A Carib or Barré tribe in Guiana.
Pawnees	Now mostly in Pawnee Reserve, Nebraska; a few still in Kansas; usually grouped with the Shoshones or Snakes, but pronounced by L. H. Morgan to be an independent stock.
Pawtuckets	See Wamesits.
Payaguas	Near Asuncion, Paraguay; formerly very powerful; akin to the Guaycurus.

Payaminos	Amazon group; on the Napo, above Coca.
Payas	Isthmian group; interior of Darien, on New Granada frontier.
Pebas	In Ecuador; unclassified.
Pecaneaux	See Piegans.
Pecherais	A collective name of the Fuegians, occurring in French works.
Pehtsiks	See Ehneks.
Pehuenches	The Araucanians between 35° and 40° S. lat.
Pelones	An Apache tribe.
Pend d'Oreilles	See Kalispelms.
Penek	The Pampas or Puelche Indians; so called by the Tehuelches.
Penelethkas	A Comanche tribe, now in Wichita Agency, Indian territory.
Pennacooks	Algonquins; originally on the Merrimac, where are now Bow, Concord, and Boscawen. By early English writers applied to all the Merrimack tribes, of which they were the chief. Speech closely akin to the Natic. The great and eloquent chief Passaconnaway was head of the Pennacook confederacy.
Penobscots	Algonquin; Maine, as far west as the Saco; one of the most powerful New England tribes in the time of Captain Smith (1614); but soon reduced by the Tarratines and pestilence. The name survives in the Penobscot River.
Peonies	Algonquin; formerly on the Illinois and Wabash Rivers.
Peorias	Algonquins; Rock Illinois River; now in Quapaw Reserve, Indian territory.
Pequaquaukes	Algonquins; originally in Carroll County, N. Hampshire, and Oxford County, Maine; extinct.
Pequots, or Pequods	Algonquins; west of Cape Cod; very powerful in early New England Annals; extinct.
Pericui	One of three stock languages of Lower California; from the 23° N. lat. to Cape St. Lucas, and on the neighbouring islands.
Pesatupos	A Matagwayi band in Gran Chaco.
Petatlan	In Sinaloa and Sonora; unclassified.
Pethowerats Pethähänerat	A tribe of Pawnees, which see.
Petiguares	A Tupi tribe on the Paraiba.
Peyes	An Araucanian tribe between 48° and 52° S. lat.
Piaros	See Macos.
Piangotos	A Carib tribe in Venezuela.
Piankeshaws	Red River, Louisiana; Missouri; Arkansas. Algonquin stock, a division of the Miamis. Now in Quapaw Reserve, Indian territory.
Piarrhaus	Amazon group; on the Madeira.
Picoris	One of the five stock languages of the N. Mexican pueblos; spoken also by two pueblos near El Paso, Texas. It is called Enaghmagh by W. Carr Lane (*Schoolcraft*, v. p. 689).

Picunches	The northern Chilians or Araucanians.
Piedgans or Peigans	Pronounced Pagans; in 1850 north of the Missouri and west of the Assiniboine nation; are Blackfeet.
Pi Edes	A Utah tribe S. of the Pah Vants, which see.
Pijaos	In Popayan, New Granada; unclassified.
Pillagers	See Mukkundwas.
Pima { Upper / Lower	In Sonora and parts of Sinaloa. The Pima seems connected with Buschmann's "Aztec-Sonora" tongues, betraying certain Mexican affinities.
Pimampiros	An extinct Quito race.
Pinaleños	An Apache tribe.
Pinches	Amazon group; on the Pastassa.
Pindos	A band of Jivaros, which see.
Piñoco	In Chiquitos; unclassified.
Pintos	On the Gulf of Mexico, S. of the Rio Grande; unclassified.
Piocaca	An unclassified tribe in Chiquitos.
Pipiles	In Salvador; Aztec stock.
Piqua	Algonquin stock; extinct.
Piques	See Pawnees.
Piritus	A Carib tribe formerly in Barcelona, Venezuela.
Piro	A Bolson de Mapimi tribe, Mexico.
Pirros	Same as Chontaquiros, which see.
Piscataquaukes	Algonquins; originally between New Hampshire and Maine; subject to the Pennacooks; extinct.
Pisone	In Tamaulipas, Mexico; unclassified.
Pisquouse	A Flathead (Columbian) tribe, originally on the W. bank of the Columbia between the Okanagan and Priest Rapids; now in Yakama Reserve, Washington.
Pitilagas	A Mocobi tribe; on the Pilcomayo.
Piutes	See Pah-Utahs.
Pocora	Isthmian group; Panamá.
Pocorosas	Isthmian group; Atlantic coast of Panamá.
Pojuaque	A New Mexican pueblo; speaks Pegua, which see.
Pokonchi, Pokoman, Pokomam	Maya stock; in Vera Paz, Guatemala; closely akin to Mame.
Polindaras	New Granada; unclassified.
Pomos	"People;" the collective name of several tribes in Potter Valley, Central California, such as the Ki Pomos, Cahto, Choam Pomos. etc.
Ponca	Isthmian group; Panamá.
Poncas	Dacotah stock, Winnebago branch; now in Ponca Reserve, Dacotah.
Ponderas	See Kalispelms.
Ponkata-gêz	Gêz family; on the Tocantins, Brazil.
Poritaco	An extinct Quito race.
Poton	Maya stock; in S. Mexico.
Pottowatomies	Algonquin stock, a branch of the Miamis, now partly on Lake Superior, Michigan, and partly in Indian territory and Kansas Reserves.
Powhattans	Algonquin stock, originally in Virginia and Maryland; extinct.

Poyas	Lenca stock ; W. Honduras, E. of the Guajiqueros.
Poy yus	See Peyes.
Pranzas	See Guatusos.
Pshawanwappam	A Sahaptin (Columbian) tribe in the Yakima Valley.
Pubenanos	An unclassified New Granada tribe.
Puctune	Maya stock ; Vera Paz.
Pueblos	Or "towns people," a large number of New Mexican tribes, so called because settled in towns and hamlets. The most important are indexed, and all will be found in Section x. of Appendix, p. 479. They speak altogether five distinct languages, as there stated.
Puelches	The Pampas Indians, La Plata.
Puelches	The Araucanians E. of the Cordilleras.
Puenches	See Pehuenches.
Puget Sound	The collective term for a group of Columbians, whose tribal names mostly end in *mish*.
Punka	See Poncas.
Puquini	Peruvian Indians on the islands in Lake Chuquito and near the Pucanari ; extinct. Their speech was different from the Quichua and all other Peruvian tongues.
Puray or Puruhá	The original speech of Quito ; extinguished by the Quichua.
Purugotes	A Carib tribe on the Venezuelan Llanos.
Puru-Purus	Amazon group ; on the Middle and Lower Purus.
Purys	A large Brazilian family in Minas Geraes, Rio Janeiro, etc.
Puyallups	In Puyallup Reserve, Washington.
Puzlumne	On west bank of the Sacramento, California.
QUADUS	A Brazilian tribe, near Miranda ; unclassified.
Quaiantl	A tribe of the Chehalis, which see.
Qualhioqua	Athabascan stock ; on N. bank of Lower Columbia, near its mouth.
Quapaws Quappas	Dacotah stock, Arkansas ; now in Quapaw Reserve, Indian territory.
Quaquas	A Salivi tribe in Popayan, New Granada.
Quaquaros	A New Granada tribe ; akin to the Ele (and Yaruras ?)
Quarecua	Isthmian group ; Panamá.
Quarlpi	See Chaudières.
Quechi	Maya stock ; Guatemala.
Quelenes	In Chiapas, S. Mexico.
Queniauitl	A tribe of the Chehalis ; now in Quinaielt Reserve, Washington.
Queres	One of the five stock languages of the N. Mexican pueblos ; by W. Carr Lane called Keswhawhay, by others Chuchacas. It is spoken by the Queres proper, of whom there are four tribes, and by four other nations.
Quibicuica	An unclassified tribe in Chiquitos.
Quiché	The Guatemalan and Honduras branch of the Maya-Quiché family, which see.
Quichua	The principal member of the Quichua-Aymara family;

	formerly current throughout the Peruvian empire, and still spoken generally in Peru.
Quijos	Same as Napos, which see.
Qui-leh-utes	A Utah tribe now in Quinaielt Reserve, Washington.
Quimeca	In Chiquitos; unclassified.
Quitasaca	In Chiquitos; unclassified.
Quiteño	The Quichua speech that superseded Puruhá in Quito not long before the Spanish conquest. Its basis is Quichua, with a mixture of Puruhá, Cara, and others.
Quits	In Quinaielt Reserve, Washington.
Quoquoultha	Nootka group; on the N. and N.E. coast of Vancouver.
RAMA	Lenca stock; Mosquito district.
Rappahannocks	Algonquin stock; on the Rappahannock, Virginia; extinct.
Rat Indians	A Kutchin tribe near Fort Yucon, Alaska.
Red Knives	An Athabascan tribe.
Redwoods	In Hoopah and Round Valleys, California.
Remos	Amazon group; on the Ucayali, around Collaria.
Renegades	In Oregon; unsettled.
Richibuctos	Algonquins; Mikmak group; formerly the most warlike tribe of this nation in Nova Scotia; now extinct.
Rickarees	Same as Arikarees, which see.
Riobamba	An extinct Quito race of thirty tribes.
Roilroilpam	Same as the Kliketats, which see.
Root-Diggers	See Bannocks.
Rotunos	A tribe of Zaparas, which see.
Rouge River	In Grande Ronde, Oregon; nearly extinct.
Runsien	Around Monterey Bay, Central California. This language seems to be somewhat widely diffused, a rare phenomenon in California.
SABAIBOS	In Sinaloa; an Acaxee tribe.
Sabuja	A Bahia tribe; akin to the Kiriri.
Sacs or Sawkee	Algonquin stock; akin to the Foxes. Some now in Sac and Fox Reserve, Indian territory; others in Great Nemaha, Nebraska.
Sacarus	A Pury tribe, formerly in Rio Janeiro.
Sacos	Algonquins; originally on Saco River, Maine; subject to the Pennacooks; extinct.
Sahaptin	A Columbian race, mainly between the Flatheads and the 45° N. lat. They are the Nez Percés of the Canadian fur traders. The Sahaptins proper are on the Clear Water and its branches, and on the Snake about the Forks. The Kamai, Lapwai, Snake, and Upper Snake, are now in Nez Percé Reserve, Idaho.
Sahnikans	Akin to the Algonquins; formerly at Absecon, New Jersey.
Sahuaripa	A dialect of the Opata, which see.
Saint Regis	In Saint Regis Reserve, New York.

Salish	A Columbian race on the Columbia and its affluents generally known as the Flatheads. The Flatheads proper are on the Flathead and Clarke Rivers.
Salivi . . .	A large nation of New Granada, on the Upper Orinoco head streams.
Sambos . . .	The Mosquitos proper, round C. Gracias a Dios, Mosquito Coast.
Sambos . . .	A half-caste Negro and Indian tribe on the Mosquito Coast.
Samish . . .	A Puget Sound (Columbian) tribe.
San Blas . . .	See Manzanillo.
Sandia	A New Mexican pueblo ; speak Picoris, which see.
San Domingo . .	A Yumbo tribe, Quichua family ; Ecuador.
Sanels . . .	Near Sanel, Central California ; unclassified.
Sangana . . .	Isthmian group ; Panamá.
Sankikani . . .	Algonquin stock ; E. bank of the Hudson ; extinct.
San Poels . . .	In Fort Colville Reserve, Washington.
Sanquampues . .	In Popayan, New Granada ; unclassified.
Sans Arcs . . .	A band of Teeton Dacotahs.
Santa Cruz . . } San Miguel . . }	These and other dialects spoken by the tribes on the group of islands off the S. Californian coast are all closely related, and may possibly be connected with the Runsien of Monterey Bay and the Salinas Valley.
Santaims . . .	In Grande Ronde, Oregon.
Santees . . .	S. Carolina ; extinct ; probably akin to the Catawbas.
Sapiboconi . . .	A Moxos tribe ; speech akin to Quichua.
Sapohan . . .	Amazon group ; on the Naney, in S.E. Ecuador.
Saravecas . . .	A Moxos tribe ; unclassified.
Sarcees . . .	The Blood Indians ; a Blackfoot tribe between N. and S. forks of the Saskatchewan, often wrongly called Chippewyans. If they are Blackfeet they must be Chippeways, or Algonquins.
Sarummas . . .	On the Juruena in Matto Grosso ; unclassified.
Satsika . . .	The Blackfeet, which see.
Saugehans . . .	Algonquins ; originally on the Saugehan and Merrimack. They were often called Natacooks or Nacooks.
Saukaulutuchs . .	Nootka group, in the interior of Vancouver.
Sauteux . . .	The Chippeways ; so called by the Canadians.
Savaneric . . .	Isthmian group ; Panamá.
Sawannucas . .	Apparently the same as the Shawnees.
Sawassaw-tinney . .	The real name of the Chippewyans proper, on Lake Athabasca.
S'calam . . .	Same as Klallum, which see.
Scoffies . . .	A Montagnais tribe ; Labrador.
Scootuks . . .	Same as Passamaquoddies, which see.
Seapeats . . .	In Yakama Reserve, Washington.
Sebassas . . .	A Hyda (Columbian) tribe ; in Pitt Islands and about Gardner Channel.
Secos	Lenca stock ; on Black River, Honduras.
Secumne . . .	On the E. bank of the Sacramento, California.
Sehuan-Cunnee . .	The Tehuelches or Patagonians N. of the Yacana-cunnee.

Seminoles Seminolie	Originally in East Florida and Georgia; speech akin to Muscogee, who are descended of them. Seminole means "Wanderer," and expresses the nomad character of this tribe. Others make it a contraction of *Isty-semole*=wild men.
Sencis	Amazon group; on the Ucayali; above the Pachitea.
Senecas	One of the Iroquois nations; called also Sinikers and Tsonontooas. New York; now in the Alleghany, Catteranga, and Tonawanda Reserves, New York, and Quapaw Reserve, Indian territory.
Serrano	See Meco.
Serrano de Cajonos Serrano de Itztepec Serrano de Miahuatlan	Tribes of Zapotecs, which see.
Serranos	See Callelehet.
Shastas	A Klamath (N. Californian) tribe, near Mount Shasta.
Shawnees Shawanees	Algonquin; originally of Pennsylvania, Ohio, and Kentucky; now in Quapaw and Sac and Fox Reserves, Indian territory. Their four great branches were the Piqua, Mequachake, Kiscapocoke or Kikkapoo, and Chilicothe.
Sheep	Properly Ambawtawhoot; an Athabascan tribe.
Sheshatapoosh	Algonquins; N. side of Gulf of St. Lawrence.
Shewhapmuch	A Shushwap (Columbian) tribe in the N. of British Columbia. By some writers called Atnahs, which see; by others called Nicute-much, which see.
Shimignes	In Ecuador; unclassified.
Shinicooks	Algonquin stock; Long Island; akin to the Metoacs; extinct.
Shipibos	Amazon group; on the Upper Ucayali.
Shiri-punos	A Zapara tribe on the Upper Napo.
Shis-Inday	See Apache.
Shiyans	See Cheyennes.
Shoshone	Or Snake family; spread over Idaho, Utah, Wyoming, Montana, Nevada, and parts of Oregon and California.
Shushwaps	A Columbian race in the valleys of the Fraser, Thompson, and Upper Columbia, with their lakes and head waters.
Shyicks	In Yakama Reserve, Washington.
Siah	Athabascan stock; on the Eel River, California.
Siaywas	In Yakama Reserve, Washington.
Sikannies	Probably Tacullies; on the Rocky Mountains, between the Beavers on the E. and the Atnahs on the W.
Sille, Silla	A New Mexican pueblo; speak Queres, which see.
Similaton	Lenca stock; Honduras.
Sinaloas	Same as Cahitas, which see.
Sinikers	See Senecas.
Sinselaus	In Alsea Reserve, Oregon.
Sioux	See Dacotah.
Sissetons	A Dacotah tribe.
Sitibos	Amazon group; on the Tambo and Perene, affluents of the Ucayali.
Sitkas	The Thlinkeets of Sitka or Baranoff Island.

Sitkeas	The Blackfeet, Piegan and Blood or Pawkee Indians of the main Saskatchewan, as far as the Missouri; speech entirely different from the Fall.
Sivinipis	A Vilela tribe on the Vermejo.
Skagits	A Puget Sound (Columbian) tribe.
Skalzi	See Kootenais.
Skatapushoish	A Montagnais tribe; Labrador.
Skeenas	A Hyda tribe on the Skeena, British Columbia.
Skid-a-gates Skid-a-gatees	Hyda tribes; Queen Charlotte Islands.
Skilloots	A Chinook tribe on the Columbia and Lower Willamette.
Skinpahs	In Yakama Reserve, Washington.
Skitsuish	Or Cœur d'Alêne (Awl-Heart); a Flathead tribe on lake of same name.
Skokomishes	In Madison Reserve, Washington.
Slavés, Slaves	See Dogribs.
Slouacuss	An Athabascan tribe.
Small Robes	A tribe of Blackfeet, which see.
Smoos	Lenca family; inland from the Mosquito Coast, about the 13° N. lat.
Snakes	See Shoshone.
Soaiatlpi	A Flathead tribe on the Upper Lewis or Snake River.
Sobaipuris	In Sonora; speech akin to Pima.
Socoas	Near Sanel, Central California; unclassified.
Soerikong	A Carib tribe in Venezuela.
Sohokies	Abenaki sub-tribe; formerly east of Boston.
Sokes	Nootka group, in the S. of Vancouver.
Sololumne	On E. bank of the Sacramento; California.
Sonomas	In the Valley of the Moon, Central California.
Souriquois	Same as Mikmak, which see.
Spokanes	A Flathead tribe on the Spokane River, and Fort Colville Reserve, Washington.
Squamscotts	Algonquins; originally about Exeter River, Maine; subject to the Pennacooks; extinct.
Squaxins	In Squaxins Reserve, Washington.
Stickeens	The Thlinkeets of the Stickeen River.
Stockbridge	Algonquins; called also Nauticokes; allied with the Iroquois, now in Wisconsin. They were originally a Mohican tribe from Massachusetts.
Stone, Stoney	Dacotah stock; the Assiniboins of the Rocky Mountains; called also Thickwood.
Strongbows	An Athabascan tribe of the Rocky Mountains.
Suisunes	In Suisun Valley, Central California.
Suma	A Bolson de Mapimi tribe.
Supinus	A Zaparo horde, Ecuador; the lowest in the social scale (A. Simson).
Surcees	See Sarcees.
Susquehannocks	On the Lower Susquehanna; called also Andastiquez and Andastes. Seem to have been Iroquois, not Algonquins; extinct.
Swampy Krees	The generic name of the Krees between Lake Winnipeg and Hudson Bay.

TACAMEZ	An extinct Quito race of twenty tribes in Esmeralda.
Tacamirys	Amazon group ; right bank of Lower Napo.
Tachacurayes	Amazon group ; right bank of Lower Napo.
Tachies	N. Texas ; akin to the Caddoes.
Taconha-piue	Amazon group ; on the Xingu.
Tacullies	The Athabascans of New Caledonia ; the "Carriers" of the fur traders ; they dwell mostly on the Upper Fraser.
Tacungas	A dialect of the Quiteño, which see.
Tadousac	A Montagnais tribe ; now on the same Reserve as the Papinachiois.
Tahahteen	Athabascan stock ; on Smith River, California.
Tahinolo	Or Naolingo ; a tribe of Huastecs, which see.
Tahlewah	N. Californian ; Klamath River.
Tahuas	Lenca group ; on Blewfields Lagoon, Nicaragua.
Tairtlas	A Nez Percé (Columbian) tribe, in the Yakima Valley.
Takhtam	S. California ; akin to the Shoshone family.
Takistine	A Lule tribe, Gran Chaco.
Takoos	The Thlinkeets S. of Chatham Strait.
Talamancas	Isthmian group ; in the S.E. of Costa Rica.
Talkotin	A Tacullie tribe.
Talches	On Tulare Lake, California.
Tallagewy	Same as Allighewi, which see.
Talluches	In the San Joaquin Valley, Central California.
Talepoosas Tapoosas	Appalachian stock ; Chickasaw branch ; destroyed by the Creeks.
Tamajab	S. Arizona and Sonora ; unclassified.
Tamanacs	A Carib tribe on the right bank of the Lower Orinoco.
Tamazulapa	A tribe of Miztecs, which see.
Tamboriacos	Amazon group ; left bank of Lower Napo.
Tamoiae	A Tupi tribe in Rio Janeiro.
Tamulipec	In Tamaulipas, Mexico ; unclassified.
Tantsawhoots	The Chipewyans of the Coppermine ; called also "Coppers."
Tao	An unclassified tribe in Chiquitos.
Taos	A North Mexican pueblo ; speak Picoris, which see.
Tapanhonas	Amazon group ; on the Tapajos.
Tapiguae	A Tupi tribe on the coast between Pernambuco and St. Vincent.
Tappes	A Tupi tribe in Rio Grande do Sul.
Tappiraques	In Matto Grosso ; unclassified.
Tapuyos	Amazon group ; the collective name of most of the riverain tribes along the course of the Amazon.
Tarahumara	One of Buschmann's four "Aztec-Sonora" tongues ; spoken in Chihuahua and Sonora, in the heart of the Sierra Madre.
Tarapaca	An Aymara tribe in the extreme S. of Peru.
Tarascos	In Michoacan ; one of the civilised nations of Mexico.
Tarapotos	Amazon group ; left bank of Lower Napo.
Tarratins	Algonquin stock, Mikmak branch, New Brunswick ; no doubt the same as the warlike Tarrenteens of early English writers.
Tarrenteens	Abenakis ; so called by some early English writers ;

	doubtless the same as the Mikmak tribe of Tarratins, which see.
Tathzey	A Kutchin tribe on the Yucon.
Tatshiautins	A tribe of the Tacullies, which see.
Taulepa	Maya stock; in San Miguel Valley, S. Mexico.
Tauros	In Sonora; unclassified.
Tautin	A Tacullie tribe.
Tawacanies	See Towaconies.
Tawaws	In 1778 on N.W. of Lake Erie; probably of Algonquin stock; extinct.
Taywaugh	The Tegua; so called by Wm. Carr Lane; see Tegua.
Teakualitzigti	A dialect of the Jalisco Cora, which see.
Tebia	A tribe of the Acaxees, which see.
Tecuexe	In the Bolson de Mapimi, Mexico; unclassified.
Tecuiche	A tribe of the Beneme, which see.
Teetons	The generic name of eight Dacotah tribes.
Teets	Nootka group; on the Lower Fraser; called also Haitlins.
Tegua	A language common to six of the North Mexican pueblos, including the Haro, one of the seven Moqui towns; see Haro and Moqui. For the other New Mexican pueblos speaking Tegua, see Sec. x. of Appendix, p. 479.
Teguis Teguima	Dialects of the Opata, which see.
Tehamas	In Tehama County, Central California; unclassified.
Tehuecos	A tribe of Cahitas, which see.
Tehuelches Tehuelhet	"Southern People;" the Patagonians; speech unrelated to any other.
Tejano	In Coahuila, Mexico.
Tejons	Tule River Reserve, California.
Tejuas	An Apache tribe.
Temorias	Algonquin stock, Illinois branch; extinct.
Tenans	A Kutchin tribe on the Yucon.
Tenawas	One of the three subdivisions of the Comanches, which see.
Teniguecbe	A tribe of the Beneme, which see.
Tepanecs	One of the three confederate Nahua or Aztec nations at the time of the Spanish conquest. Their capital was Tlacopan in Anahuac.
Tepave	In Sonora; unclassified.
Tepecano	In Jalisco, Mexico; unclassified.
Tepehuana	One of Buschmann's four "Aztec-Sonora" tongues; N. Sinaloa, N. Durango, and S. Chihuahua, Mexico.
Tepocas	On N. coast of Sonora; akin to the Tiburones.
Tepuzculano	A Miztec tribe.
Terecunas	Tupi stock; Rio Negro Valley.
Terrabas	Isthmian group; in the W. of Costa Rica.
Terrinos	Warm Spring Reserve, Oregon; nearly extinct.
Tesuque	Same as Tegua, which see.
Tetikilhati	A tribe of Huastecs, which see.
Thetliotins	A tribe of the Tacullies, which see.
Thickwood	See Stoney.
Thlingcha	An Athabascan tribe.

Thlinkcet	Sub-Arctic group, forming a sort of connecting link between the Eskimo and the Tinney. Next to Chinook the harshest language perhaps in all America. Spoken along the Pacific from the Atna to the Nass. Known also by the Aleut term *Kolosh*.
Thnaina; Tnae	"Men;" same word as Tinney and Kenai, which see.
Thongeiths	See Kowitchans.
Tiburones	On N. coast of Sonora and Tiburon island, in the Gulf of California.
Ticunes	In Ecuador; unclassified.
Tiddoes	Texas (1851); unclassified.
Tijanes	An extinct Quito race.
Tikomeri	A Moxos dialect in the S. Xaverio Mission, Moxos.
Tillamooks	In Grande Ronde, Oregon.
Timbiras	A numerous race in Goyaz, Brazil; akin to the Gês. Their chief tribes are the Mata, Canella fira, and Bocca furada Timbiras.
Timmiscameins	Algonquin stock, Chippeway branch; Upper Canada.
Timpanagos	Mu'dy Valley Reserve, Nevada.
Timuacanas, Timucuas	Appalachian stock; E. Florida and E. coast Georgia; highly synthetic speech; extinct.
Tinney, Tinneh	"Men;" the term by which most of the Athabascan tribes call themselves. See Athabascan and Chippewyan.
Tinqua	An extinct Florida tribe.
Tiquizambiz	An extinct Quito race.
Tiribi	Isthmian group; Costa Rica.
Tiverigotos	A Carib tribe in Venezuela.
Tlacacebastla	Maya stock; in S. Mexico and Guatemala.
Tlascaltek	Aztec stock; San Salvador.
Tlaskanai	Athabascan stock; on S. bank of Lower Columbia.
Tlaxiaco	A tribe of Miztecs, which see.
Tlaxomultecas	In Jalisco, Mexico.
Toba	A branch of the Mocobi between the Pilcomayo and Vermejo.
Tobikhar	S. California; akin to the Shoshone family.
Toboso	In the Bolson de Mapimi, Mexico; unclassified.
Tocantins	An Omagua (Guarani) tribe on the Tocantin in Goyas and Para.
Tolewahs	A Klamath tribe; on the coast of North California; Athabascan stock.
Toltecs	A Nahua race; founders of the earliest Mexican empire, supposed to date from the sixth century, and probably the pyramid-builders. To the Toltecs nearly everything is attributed in the obscure and mythical Mexican records and traditions. Some think the Toltecs were not originally Nahuatlacs, but adopted their speech after subduing them in the sixth century. See Aztec and Nahua.
Tomuzas	A Carib tribe formerly in Cumana, Venezuela.
Tonkaways	Florida; unsettled.
Tonocote	A Lule tribe in Gran Chaco; the Mataras of early writers.

Tontos . . .	An Apache tribe.
Toonglas . . .	A mixture of Smoos and Sambos, which see; 15° N lat.
Topia . . .	A tribe of the Acaxees, which see.
Topocuares . .	A Carib tribe in Barcelona, Venezuela.
Torresques . .	Isthmian group; interior of Costa Rica.
Totonacs . .	One of the civilised Mexican races, on the coast E. of Tlascala, in the N. of the present state of Vera Cruz; Maya stock.
Tototin . . .	Same as Lototen, which see.
Towacarros . .	Formerly on the Brasos, below Fort Belknap, Texas; akin to the Wacoes; now in Wichita Reserve, Indian territory.
Towaconies . .	
Towekas . . .	Akin to the Towiacks, which see.
Towiacks . . .	N. bank of Red River of Louisiana; akin to the Pawnees?
Towkas . . .	Lenca stock; E. of the Woolwas, as far as Blewfields, Honduras.
Toxas	Isthmian group; interior of Costa Rica.
Troes . . .	In Sinaloa; unclassified.
Tsatsnotins . .	A tribe of the Tacullies, which see.
Tshe-tsi-uetin-euerno .	"N.N.E. People;" the national name of the Montagnais, which see.
Tsillawdawhoot .	See Brushwood.
Tsimsheeans . .	A Hyda nation about Fort Simson and Chatham Sound, British Columbia.
Tsonecas . . .	The Tehuelches or Patagonians; this is the name by which they call themselves.
Tsnontooas . . .	See Senecas.
Tuanooch . . .	Puget Sound (Columbian) tribe, at Hood's Canal.
Tuapocas . . .	A Carib tribe between the Caripe hills and Maturin.
Tubares . . .	In the Chihuahua and Durango highlands; speak an Aztec-Sonora language.
Tucanos . . .	A Barré tribe in Guiana.
Tuchales . . .	Amazon group; on the Pastassa.
Tuchinwas . . .	Amazon group; on left bank of the Middle Jutahi.
Tucunas . . .	Amazon group; widely diffused on the Iça and Solimoens.
Tukudh . . .	Same as Kutchin, which see.
Tule	Isthmian group; Darien.
Tules	Tule River Reserve, California.
Tumanaes . . .	In Popayan, New Granada; unclassified.
Tummimivi . . .	A Tupi tribe in Rio Janeiro.
Tungass . . .	The southernmost Thlinkeets; about the river Nass.
Tunja	New Granada; unclassified.
Tupi	The N.E. branch of the Guarani family; the Lingoa Geral, also called Brazilian. The Tupis proper are in Bahia.
Tupinabas . . .	A Tupi tribe.
Tupinambas .	A Tupi tribe along the course of the Rio Real.
Tupinambaranas .	
Tupininquins . .	A Tupi tribe in Espirito Santo, Ilheos, and Porto Seguro.
Tupitîpis . . .	A tribe of the Zaparas, which see.

Turas	Amazon group; on the Madeira.
Tuscaroras	One of the Iroquois nations who joined the confederacy from N. Carolina in 1712; now in Tuscarora Reserve, New York.
Tutchone	A Kutchin tribe about the Yucon.
Tutelos	Iroquois, Monacan branch, Virginia; extinct. They seem to have been the same as the Meterries, which see.
Tuvares	In Sinaloa; unclassified.
Twanas	Madison Res., Washington.
Two Mountain	Iroquois stock; fragments of Mohawks and Oneidas; now on the St. Lawrence above Montreal.
Tzendales (Celdale)	In Chiapas, S. Mexico; Maya stock. The Abbé Brasseur considers the Tzendal as the purest, or rather typical language of the Maya-Quiché family.
UACAAS	A Vilela tribe on the Vermejo.
Uaenambeus	"Humming-birds," Amazon group; on the Japura.
Uara-Mukuru	A tribe of Tamanacs, which see.
Uara-Paccili	A tribe of Tamanacs, which see.
Uaüpes	Amazon group; generic name of about thirty tribes on the Negro, above the rapids of San Gabriel.
Uchees, Utchees	Formerly in S. Carolina and Georgia; now merged with the Creeks, but originally of different speech, probably akin to Natchez.
Uchitle	A tribe of the Lower Californian Guaicuris.
Ucletes	See Kowitchans.
Ugalenz	A Kenai tribe in the interior of Alaska.
Ugalenzes	The Thlinkeets between Mount St. Elias and Copper River.
Ukiahs	Near the town of Ukiah, Round Valley, Central California.
Ulua	Maya stock; Guatemala.
Umatillas	In Umatilla Reserve, Oregon.
Umpquas	Athabascan stock? Pacific coast, about 44° N. lat. on river of like name; now in Alsea Reserve, Oregon.
Unaliskans	The Aleuts of the Alaskan peninsula (S.W. corner) and Fox islands.
Unepappas	A band of Teeton Dacotahs.
Unshagogs	Algonquin stock, on the coast opposite Long Island; extinct.
Upanos	A band of Jivaros, which see.
Upsarokas	Same as Crows, which see.
Urabas	Isthmian group; W. of the Dorachos, about 9° N. lat.
Uribas	
Uracas	Isthmian group; Pacific coast of Panamá.
Urubas	An unclassified New Granada tribe, on the Lower Atrato.
Urupas	Amazon group; on the Madeira.
Utahs, Utes	A branch of the Snake family in Utah, Nevada, and along the Upper and Middle Colorado. The Utah tribes are very numerous.
Uzpantec	Maya stock; Guatemala.
VALIENTES	Isthmian group; Chiriqui Mountains, Costa Rica.

Vanta Kutchins	The Kutchins west of the Loucheux, which see.
Vaqueros	An Apache tribe.
Varaychú	Amazon group; on the Içá, in E. Ecuador.
Varogio	A tribe of Tarahumaras, which see.
Vayphys	Amazon group; on the Teffé.
Vebetlateca	Maya stock; in Soconusco.
Veraguas	Isthmian group; in Veraguas, between Chiriqui and Panamá; probably a tribe of Dorachos, which see.
Vesperic	*i.e.* "Western;" a generic term applied by some writers to all the United States tribes, whose point of migration in their traditions was from the west or south-west. These are the Appalachians, Cherokees, Algonquins, Iroquois, and Dacotahs. (Schoolcraft.)
Vicuris	A New Mexican Pueblo; speaks Picori, which see.
Vilela	A large family in Gran Chaco; akin to the Lule.
Vocaregui	In Sonora and Sinaloa; unclassified.
Vuta-Huilliche	The southernmost Araucanians, reaching as far as the Strait of Magellan.
WABIPETONS	A band of the Isaunties, a branch of the Dacotahs proper.
Waches	On King River, Central California.
Wachos	Akin to the Towiacks, which see.
Wachusetts	Algonquins; originally near Wachusetts Mountain, Mass., subject to the Pennacooks; extinct.
Wacoes, or Huecos	S.W. Texas, Rush Creek; akin to the Witchitas, a subdivision of the Pawnee nation.
Waganukizzi	Or Arbre Croche; the principal Ottawa settlement, E. of Lake Michigan.
Wahpaakootas Wahpeetons	See Washpecoutes.
Wahsash	Same as Osages, which see.
Wahtohtanes	Same as Otoes, which see.
Waiyamara	A Carib tribe in Guiana.
Wakiakums	A Chinook tribe between the Cowlitz and the Pacific.
Walhallas	See Gualalas.
Walipekutes	A band of the Dacotahs proper (Isaunties).
Walla Wallas	A Nez Percé tribe on the Lower Walla Walla, and near the junction of the Snake and Columbia; some in Umatilla Reserve, Oregon.
Wallies	A Klamath tribe on the N. Californian coast.
Wamesits	Algonquins; originally on the forks of the Merrimack and Concord, where are now the cities of Lowell, Tewksbury, etc.; Middlesex Co., Mass.
Wampanoags	See Narragansets.
Wanami	Algonquin stock, Lennape branch.
Wapanachki	See Abenaki.
Wapisianos	A Carib tribe in Venezuela.
Wappata Lakes	Grande Ronde, Oregon; nearly extinct.
Warineka	A Carib or Barré tribe in Guiana.
Warm Springs	In Warm Spring Reserve, Oregon.
Warows	Oronoco Delta; probably Tupi stock; called also Guaranos.

Wascos	A Sahaptin (Columbian) tribe, between the Rocky Mountains and the John Day River.
Washoes	A tribe of Utahs along the E. foot of the Sierra Nevada.
Washpecoutes	A band of Isauntie Dacotahs.
Wasitas	Now in Indian Territory.
Waterees	S. Carolina, extinct. Akin to the Catawbas.
Watlalas	A Chinook tribe on the Columbia and Lower Willamette.
Watsahewa	N. California; Scott's River; Shasta family.
Wattasoons	Same as Mattasoons, which see.
Wawenoc	Algonquin stock; an Abenaki sub-tribe, Maine, died out 1750. Have been credited by some ethnologists with a system of numerals which are really Kymric or old British, brought over by some early Welsh or Cumbrian settlers. When the memory of their true origin was forgotten, the English-speaking colonists attributed them to the Indians, and they were afterwards used as an argument to prove that the Wawenoc Red men were of British descent.
Weas	Migrated to Missouri in 1820; Algonquin stock; now in Quapaw Reserve, Indian territory.
Weeyots	A Klamath tribe on the N. Californian coast.
Weitspek	N. Californian; the chief tribe on the Klamath, at its junction with the Trinity; same as the Pataways.
Wichumnies	Tule River Reserve, California.
Wilacki	A Hoopah tribe on the W. slope of Mount Shasta, California.
Wininashts	The Western Shoshones of Idaho and Oregon.
Winnebagoes	Dacotah stock; the aborigines of Central Wisconsin, and parents of the Iowas, Missouris, Otoes, and Omahas. By the French called Puants.
Winnecowetts	Algonquins; originally in Rockingham Co., Maine; subject to the Pennacooks; extinct.
Winnepesaukies	Algonquins; originally near the lakelet of that name, Merrimack Valley. This word is composed of *winne* = beautiful, *nipe* = water, *kees* = high, *auke* = place—meaning the beautiful upland water.
Wintoons	A Klamath tribe on the Pitt River, N. California.
Wishams	In Yakama Reserve, Washington.
Wishosk	A Klamath nation on the N. Californian coast; their idiom is common to the Bay and Mad River tribes.
Witchetaws, Witchitas	S.W. Texas, Rush Creek; akin to the Wacoes and Yowaconees, subdivisions of the Pawnee nation; some in Wichita Reserve, Indian territory.
Woccons, or Woccoas	Akin to the Catawbas; N. Carolina. Here the Woccoas were indigenous, and the Catawbas probably immigrants from the Ohio Valley.
Woolwas	Lenca stock; in the western part of the Mosquito Coast.
Woowells	On Tulore Lake, California.
Woyawais	A Carib tribe in Venezuela.
Wunalachtigo	Algonquin stock; Lennape branch.

Wyandots	Or Hurons; Iroquois stock, about the lake region; some now in Quapaw Reserve, Indian territory and others in Kansas.
Wylackies	In Round Valley, California; nearly extinct.
XALTEPECS	A tribe of Miztecs, which see.
Xanambres	On the Gulf of Mexico, S. of the Rio Grande; unclassified.
Xicaques	Lenca family; W. of the Smoos, about 68° W. long.; Nicaragua.
Xixímes	In Durango, S. of the Acaxees; a tribe of the Acaxees, which see.
YACANACAS	A Fuegian tribe.
Yacana-cunnee	The southernmost Patagonians on the Strait of Magellan.
Yachichumnes	Near Stockton, Central California.
Yacons	A N. Californian tribe, N. of the Klamath.
Yaguas	Amazon group, on the Ambiyacu, Ecuador; unclassified.
Yaguarzongo	An extinct Quito race of twelve tribes.
Yahabanas	A Carib or Barré tribe in Guiana.
Yahgau	A Fuegian tribe.
Yaks	The Eskimos; so called by the whalers in Baffin Bay.
Yakamas Yakimas	A Nez Percé tribe in the Yakima Valley and near Mount Adams; some also in Yakama Reserve, Washington.
Yakutats	The Thlinkeets of Bering Bay.
Yaltasses	Red River, Louisiana; extinct.
Yamassees	A Catawba tribe, S. Carolina; extinct.
Yameas	Amazon group; on the Tigre.
Yamkally	A Chinook (Columbian) tribe at the source of the Willamette.
Yampais	Yuma stock; near the Rio Hassayampa.
Yamparecks	One of the three subdivisions of the Comanches, which see.
Yancales	In Popayan, New Granada; unclassified.
Yanguistlan	A tribe of Miztecs, which see.
Yanktonais	A Dacotah tribe.
Yanktons	A branch of the Dacotahs proper.
Yaoi	A Carib tribe; formerly of Trinidad and Cumana.
Yaqui	A Cahita or Sinaloa nation on the river Yaqui; see Cahita.
Yaraies	Akin to the Bororos, which see.
Yaruras	A large group; perhaps akin to the Salivi, New Granada.
Yasumne	On the right bank of the Sacramento, California.
Yasunies	A tribe of Zaparas, which see.
Yavapais Yavipais	Yuma stock; Arizona.
Yawaran	Amazon group; on the Naney, between the Napo and the Tigre.
Yazoos	A Chickasaw tribe, Appalachian stock.
Yecoanitas	On the Vermejo; a Vilela tribe.

Yeconoempas	A Vilela tribe on the Upper Salado.
Yellow-Knives	See Dogribs and Atnahs.
Yemê	In Tamaulipas, Mexico ; unclassified.
Yetans	See Comanches.
Yete	An Omagua (Guarani) tribe ; on the Napo, Ecuador.
Yolos	On Cache Creek, Central California.
Yoocos	A Vilela tribe ; on the Vermejo.
Yquitos	Amazon group ; akin to the Avijeras ; Lower Napo.
Ysete	A New Mexican Pueblo ; speak Picoris, which see.
Yuê	In Tamaulipas, Mexico ; unclassified.
Yukas	A Klamath tribe on the N. Californian coast.
Yukuths	The Kutchins of Porcupine river ; called also Kukuth.
Yuma	A numerous Arizona race on the Colorado and Gila, with branches in S. California.
Yumbos	A numerous Quito race of eighteen tribes ; Quichua family.
Yungas	See Chimus.
Yuracares	An unclassified Bolivian race.
Yurimaguas	An Omagua (Guarani) tribe ; on the Yuruba, an Amazon affluent, and in Solimoes, Brazil.
Yutas	See Utah.
Zaachilla	A tribe of Zapotecs, which see.
Zacatecas	In Zacateca, Mexico ; unclassified.
Zaklohpakap	Same as Mame, which see.
Zamanucas	An unclassified tribe in Chiquitos.
Zamoras	A band of Jivaros, which see.
Zaparos	Amazon group ; right bank of the Middle Napo.
Zaparos	Amazon group ; on the Curaray, a tributary of the Napo. This tribe is different from the foregoing.
Zapotecs	One of the civilised Mexican nations in E. Oajaca. They ruled over all the Tehuantepec tribes, and are still numerously represented between the Valley of Oajaca and Tehuantepec.
Zarza	See Yumbos.
Zeltales	Maya stock ; Chiapas, near S. Christobal, S. Mexico ; said to speak the purest of all the Maya-Quiché tongues.
Zendal-Queler	
Zeonas	A tribe in Pará, Brazil ; perhaps akin to the Omagua.
Zeonas	A New Granada tribe of which nothing is known.
Zesuqua	A New Mexican Pueblo ; speak Picoris, which see.
Zoe	In Sonora and Sinaloa ; unclassified.
Zoque	Maya stock ; Guatemala and Chiapas.
Zotziles	In Chiapas, S. Mexico.
Zuaques	In Sinaloa ; unclassified.
Zumanamá	Isthmian group ; Panamá.
Zuñi	One of the five stock languages of the New Mexican Pueblos ; spoken by the Zuñi Pueblo only.
Zutugil	Maya stock ; Guatemala.

TABULATED SURVEY OF THE CENTRAL AMERICAN STATES.

NAME.	POPULATION.	AREA.	CHIEF TOWNS.			PRODUCTS—EXPORTS.
MEXICO	9,176,000 (1871)	761,642 sq. miles.	Mexico.	Pop.	200,000	Bananas, coffee, maize, vanilla, cochineal, medicinal plants, tropical and sub-tropical fruits, silver.
			Guadalaxara.	,,	75,000	
			Puebla.	,,	75,000	
			Guanaxato.	,,	63,000	
			Queretaro.	,,	48,000	
			Merida.	,,	35,000	
			S. Louis Potosi.	,,	33,000	
			Aguas Calientes	,,	32,000	
			Zacatecas.	,,	30,000	
			Durango.	,,	26,000	
			Oaxaca.	,,	25,000	
			Colima.	,,	20,000	
			Vera Cruz.	,,	10,000	
GUATEMALA	1,195,000	40,777 ,,	Guatemala.	,,	60,000	Cochineal, sugar, coffee, indigo, wheat, maize, timber, dyewoods.
			Quesaltenango.	,,	20,000	
			Coban.	,,	12,000	
			Amatitlan.	,,	10,000	
HONDURAS	352,000	47,092 ,,	Comayagua.	,,	8,000	Gold and silver, dyewoods, timber, stock-breeding.
			Omoa.	,,	1,500	
			Tegueigalpa.	,,	12,000	
			Juticalpa.	,,	4,000	
			Truxillo.			
SAN SALVADOR	600,000	7,547 ,,	San Salvador.	,,	20,000.	Indigo, sugar, cotton, coffee.
			San Miguel.			
			La Union.			
			La Libertad.			

NICARAGUA . .	400,000	58,168	,,	Leon. ,, 25,000 Managua. ,, 10,000 Realejo, Concordia.		Gold and silver (in Chontales)
COSTA RICA . .	200,000	21,493	,,	San José. ,, 25,000 Cartago. ,, 10,000 Punta Arenas. Limon.		Coffee.
BELIZE (British Honduras).	25,700	13,543	,,	Belize. ,, 5,000 Carozal. ,, 5,000 Port Stephen. Port Louis.		Mahogany, cochineal, indigo.

TABULATED SURVEY OF THE PRINCIPAL WEST INDIAN ISLANDS.

I. THE GREAT ANTILLES—CENTRAL AMERICA.

NAME, POPULATION, AND EXTENT.	HISTORY.	CHIEF TOWNS.	PRODUCTS AND INDUSTRIES.
CUBA. Population, 1,414,000 (1867). Area, 43,220 square miles.	October 28, 1492. Discovered by Columbus. 1511. Settled by the Spaniards. Divided into three departments, a western, a central, and an eastern. A sanguinary insurrection has been raging since the year 1868.	Havanna, on the N. coast, 196,000 inhabitants. The seat of government. Matanzas, 40,000 Cardenas, 5000 } on the N. coast. Nuevitas, 6000 Puerto Principe, 39,000 Bayamo, 12,000 } in the interior Espiritu Santo, 11,000 Santiago de Cuba, 37,000 Trinidad, 10,000 } on the S. coast. Cienfuegos,	Sugar, molasses, rum, tobacco, cocoa, cotton, rice, arrowroot, indigo, bananas, potatoes, coffee, fruits, timber, coal. Plantations, cattle and swine breeding.
ISLE OF PINES. Population, 800. Area, 1214.	1494. Discovered by Columbus; attached to the government of Cuba.	Nueva Gerona, on the N. coast; Alqueria on the S. coast.	Pine and mahogany. Cattle-breeding.
HAYTI and S. DOMINGO. Population of Hayti, 572,000; of S. Domingo, 250,000. Area of Hayti, 10,204 sq. miles. S. Domingo, 18,045 sq. miles.	December 6, 1492. Discovered by Columbus; originally settled by Spain. 1795. Hayti finally ceded to France. 1803. The Whites expelled, and an empire set up, from which San Domingo revolted and set up a republic in 1808. In 1820 both states were re-united as a republic, and again separated in 1843. At present the island is divided into two independent republics.	Port-au Prince, capital of Hayti, 21,000; Cap. Haiti, 12,000. S. Domingo, capital of S. Domingo, 15,000. Santiago, 14,000 } in the interior Concepcion, 9000 } of S. Domingo	Sugar, coffee, tobacco, cocoa, rum, cotton. Mahogany, logwood, guano, gold, silver, tin, coal, iron. Plantations. Trade entirely in the hands of the English and Americans.

JAMAICA. Population, 506,000 (1871). Area, 6900 sq. miles.	*1494. Discovered by Columbus. 1510. Settled by the Spaniards. 1655. Taken by the English, in whose hands it has since remained. Is divided into the counties of Middlesex, Cornwall, and Surrey.*	*Spanishtown, seat of government, 700.* Kingston, the chief seaport, 34,500. Port Royal, 15,000. Montego, 6000.	Sugar, coffee, rice, rum, tobacco, cocoa, arrowroot, spices, cedar, cinchona, wood. Lead, copper, silver, zinc, antimony, iron, manganese.
PORTO RICO. Population, 646,000 (1867). Area, 3550 sq. miles.	1493. Discovered by Columbus. 1509. Settled by the Spaniards, in whose hands it has since remained, with the neighbouring little islands divided into eight departments.	San Juan de Puerto Rico, the capital, 19,000. S. German, 10,000.	Sugar, coffee, tobacco, cotton, timber, hides, rum, cattle, salt, copper, iron, lead, gold, coal. Plantations, mining.

II. THE LESSER ANTILLES—WINDWARD GROUP.

NAME, POPULATION, AND EXTENT.	HISTORY.	CHIEF TOWNS.	PRODUCTS AND INDUSTRIES.
ANEGADA. Population, 350. Area, 38.	1494. Discovered by Columbus. Till 1666 a Buccaneer station, when it was settled by the English. One of the Virgin Group.	. . . . .	Sea salt, fisheries.
SNAKES ISLAND. Population, 2500 (1871). Area, 91.	Since 1650 in the hands of the English.	. . . . .	Salt, cattle, ponies, garden produce. Agriculture.
ANTIGUA. Population, 35,560 (1871). Area, 280.	1493. Discovered by Columbus. Since 1668 an English colony.	S. John's, 16,000; English Harbour; Falmouth; Parham.	
BARBADOES. Population, 162,000 (1871). Area, 430.	1625. Colonised by Dean. Since 1605 in the hands of the English.	Bridgetown, 35,000. Holetown and Speightstown.	Sugar, arrowroot, aloes, cotton. Plantations.

II. THE LESSER ANTILLES—WINDWARD GROUP—*Continued.*

NAME, POPULATION, AND EXTENT.	HISTORY.	CHIEF TOWNS.	PRODUCTS AND INDUSTRIES.
BARBUDA. Population, 813. Area, 194.	1493. Discovered by Columbus. 1636. Taken by the English. Attached to the government of Antigua.	. . . . .	Wood, cattle, horses, potatoes, and fruits.
DOMINICA. Population, 27,585 (1871). Area, 754.	1493. Discovered by Columbus. In 17th century occupied by the French. 1756. Taken by the English; and 1783 finally ceded to them.	Roseau, 4700. Charlottetown, S. Joseph. Portsmouth, S. Andrews.	Rum, sugar, cocoa, coffee. Plantations and industries.
GRENADA. Population, 31,250. Area, 345.	1498. Discovered by Columbus. 1650. Colonised by the French. Since 1763 an English colony.	Georgetown, 4570. Charlotte, Grenville.	Sugar, coffee, rum, cocoa, cotton. Plantations and industries.
THE GRENADINES. Population, 6400. Area, 86.	1498. Discovered by Columbus. Since 1763 an English possession.	. . . . .	Wood, sugar, cotton, corn. Plantations, fisheries.
GUADELOUPE. Population, 149,525 (1871). Area, with the adjoining islets, 1800.	1493. Discovered by Columbus. 1635. Seized by French Buccaneers. 1759-63. In the hands of the English, who again occupied it in 1813 and 1815. Since 1816 a French colony.	Basse Terre, 6760. Capesterre, 8330. Pointe-à-Pitre, 13,786. St. Anne, 7584. Le Moule, 9840. Port Louis, 4900.	Sugar, coffee, rum, cocoa, cotton, dyewoods, spices, fruits, cattle. Plantations and industries. Cattle-breeding, shipping.
MARTINIQUE. Population, 154,000 (1870). Area, 988.	1493. Discovered by Columbus. 1635. Colonised by the French. 1758. The native Caribs were removed to S. Domingo and S. Vincent. From 1794 to 1802, and again, 1809-1815, in the hands of the English. Since then French.	Port de France, 11,750. Saint Pierre, 25,270. Le Havre de la Trinité, 7000. Le Havre du Robert, 6556.	Sugar, rum, coffee, cocoa, cotton, cassia, and dyewoods. Plantations and industries.

Montserrat. Population, 8690. Area, 122.	*1493. Discovered by Columbus. 1632. An Irish colony. 1712-46. French. Since then English, under the government of Antigua.*	*Plymouth, 1500.*	Sugar, maize, cotton, coffee, indigo. Plantations.
Nevis. Population, 11,735 (1871). Area, 113.	1628. Settled by the English; for a time in the hands of the French. Since 1783 English.	Charlestown.	Sugar. Plantations.
Saba. Population, 1936 (1870). Area, 13.	A Dutch possession; but the inhabitants speak English.	Le Fond.	Vegetables, sweet potatoes, and other garden produce; boat-building.
St. Bartholomew. Population, 2900. Area, 21.	1648. Colonised by the French; after many vicissitudes ceded to Sweden in 1785.	Gustavia, 908.	Vegetables; fisheries.
St. Christopher (St. Kitts). Population, 28,160 (1871). Area, 176.	1623 and 1637 in the hands of English and French Buccaneers. Till 1713 jointly occupied by English and French. Since then English alone.	Basse Terre. Old Road.	Sugar, rum, coffee, arrowroot, sweet potatoes, indigo, salt. Plantations.
Santa Cruz. Population, 22,760 (1870). Area, 74 square miles.	1498. Discovered by Columbus. Since 1733 Danish.	Christianstead, 6000. Frederichstead, 3000.	Sugar and other plantations. Shipping.
St. John. Population, 1054 (1870), 1574 (1860). Area, 21 square miles.	1494. Discovered by Columbus. Since 1717 Danish.	. . . . .	Sugar; shipping.
St. Lucia. Population, 31,610 (1871). Area, 642.	1498. Discovered by Columbus. 1640. Taken by the French. 1713. Declared neutral territory. 1739-62. Jointly held by English and French. 1765. French alone. 1814. Ceded to England.	Port Castries, 3500; Old Fort; La Soufrière, 1800.	Cocoa, coffee, sugar, rum, some cotton, mahogany and other timbers, fruits. Plantations; shipping.

II. THE LESSER ANTILLES—WINDWARD GROUP—*Continued.*

NAME, POPULATION, AND EXTENT.	HISTORY.	CHIEF TOWNS.	PRODUCTS AND INDUSTRIES.
ST. EUSTACHE. Population, 2050 (1870). Area, 20.	1635. Taken by the Dutch, and after changing hands many times finally ceded to them. The inhabitants speak English.	Orangetown.	Sugar, rum, sweet potatoes. Plantations; shipping.
ST. MARTIN. Population, 6020 (1870). Area, 98.	Since 1638 jointly held by French and Dutch, the former in the north-west, the latter elsewhere.	Marigot (French). Phillipsbourg (Dutch).	Cotton, sugar, salt. Plantations; shipping.
ST. THOMAS. Population, 14,000 (1870). Area, 23 square miles.	1493. Discovered by Columbus. 1671. Settled by a Danish trading company. Since 1755, with a short interruption, in the hands of the Danes.	Port St. Thomas, 12,000.	Sugar, rum; shipping.
ST. VINCENT. Population, 35,686 (1871). Area, 130 sq. miles.	1498. Discovered by Columbus. With the exception of the years 1779-83, an English possession.	Kingstown, 5400 Princestown, Georgetown. Château-Belair.	Sugar, rum, cocoa, cotton, flour, arrowroot. Plantations, fisheries.
TOBAGO. Population, 17,054 (1871). Area, 120 square miles.	1498. Discovered by Columbus. 1632. Colonised by the Dutch, later on by Curlanders. 1677 to 1763. Held by the French. Since 1814 an English possession.	Scarborough, 1200. Georgetown, Milfordtown. Plymouth.	Sugar, rum. Plantations.
TORTOLA. Population, 6050 (1868). Area, 24 square miles.	1493. Discovered by Columbus. First settled by the Dutch. Since 1666 English.	Road Harbour.	Sugar, rum, coffee. Plantations; shipping.
VIRGIN GORDA. Population, 768. Area, 10 square miles.	1494. Discovered by Columbus. Since 1666 in the hands of the English.	Spanish Town.	Cattle-breeding; charcoal.

VIRGIN ISLANDS. Population, 47,700. Area, 694.	1493. Discovered by Columbus. Belong partly to England, partly to Spain and Denmark.		Sugar, rum, spices, cotton, tobacco, indigo, salt. Plantations; sheep, goats, swine.

III. LESSER ANTILLES—LEEWARD GROUP.

NAME, POPULATION, AND EXTENT.	HISTORY.	CHIEF TOWNS.	PRODUCTS AND INDUSTRIES.
ARUBA or ORUBA. Population, 4525. Area, 165.	1527. Discovered. A Dutch settlement.	Orangestad.	Timber and cochineal.
BIRDS ISLANDS (Aves). Uninhabited.	Formerly Dutch. Since 1856 belong to Venezuela.		Guano.
BUEN AYRE. (Population, 4246. Area, 330.	A Dutch settlement.	El Puerto.	Salt, cochineal, timber.
CURACAO. Population, 22,345. Area, 550.	1627. Taken by the Spaniards. 1634. Conquered by the Dutch. 1798-1801. Held by the English. 1814. Ceded to Holland.	Willemstad, 8400. Santa Cruz.	Sugar, cotton, tobacco, manioc, maize, bananas, cocoa; cattle, horses; liqueurs, brandy.
MARGARITA. Population, 30,980. Area, 1145.	1498. Discovered by Columbus. Passed from Spain to Venezuela.	Asuncion, 2758. Pampatar. Sabana Grande.	Sugar, coffee, cocoa, bananas, maize. Plantations, pearlfisheries, shipping.
TRINIDAD. Population, 109,638 (1871). Area, 1755 square miles.	1498. Discovered by Columbus. 1545. Occupied by the Spaniards. Since 1797 an English colony.	Port of Spain or Spanish Town, 20,000; Anna Parima; S. Fernando; S. José de Oruna.	Sugar, coffee, cocoa, cotton, indigo, tobacco, asphalte. Plantations; shipping.

IV. THE LUCAYAS, OR BAHAMA ISLANDS.

The first islands discovered by Columbus on his first voyage in 1492; were colonised by the English in 1629, and held by the Spaniards from 1641 to 1697, when they were again seized by the English. Subsequently occupied by the Buccaneers, order was restored in 1718. In 1781 ceded to Spain, they were temporarily held by the Americans in 1782, but passed next year finally into the hands of the English.

They consist of twelve large islands, 661 islets, or cays as they are called, and 2387 banks and rocks above the surface of the water. They all rise at the edge of large coral banks, and are of coral formation, with a mean elevation of 100 feet above the sea-level, some, however, rising to a height of 400. The land is mostly rocky and sandy, adapted only for the growth of timber, maize, and pulse. Springs are rare; but on several of them are large salt lakes, rising and falling with the tides. Climate warm and healthy; hurricanes very frequent; and the navigation extremely dangerous.

Total area, 3021 English square miles. Population, 39,160—of whom 5500 whites, 32,662 coloured.

Products—Salt; sub-tropical fruits, especially pine-apples and oranges; cotton, maize, sweet potatoes, manioc, melons, arrowroot, dyewoods; timber suited for shipbuilding, carpenter and joiners' work; sponges, turtles. Exports in 1871, £200,000.

The largest and most important of the Bahamas, taking them in their order from north-west to south-east, are—Bahama, Great Abaco, Eleuthera, New Providence, Andros, Cat Island, Watlings, Yuma, Acklin, Mariguana, The Caicos (North, Grand, and East), Inagua (Great and Little), Turk Islands. Watlings Island, about the centre of the archipelago, is the true San Salvador of Columbus, that is, the first land in the New World discovered by him on October 12th, 1492. It is considered the most fertile of the whole group. The neighbouring Cat Island, formerly wrongly supposed to be the spot where Columbus first landed, is now, consequently, sometimes called False San Salvador.

TABULATED SURVEY OF THE SOUTH AMERICAN STATES.

NAME.	HISTORY.	AREA AND POPULATION.	POLITICAL DIVISIONS.	CHIEF TOWNS.	PRODUCTS AND INDUSTRIES.
ARGENTINE CONFEDERATION, formerly United States of the Rio de la Plata. Republic.	In 1509 the river Plata discovered by Juan Diaz, and in 1515 ascended by him to its junction with the Paraná. In 1527 Fort San Espiritu erected by Sebastian Cabot on the Paraná. In middle of the 16th century occupied by the Spaniards, and in 1776 organised as the Viceroyalty of the Rio de la Plata. 1816. Declaration of Independence.	515,700 square miles. Population in 1869, 1,736,922.	14 Federal States :— A. *Northern States :* 1. Jujuy, 40,000 inhabitants 2. Salta, 88,930. 3. Tucuman, 109,000. B. *States of the Cordilleras :* 4. Catamarca, 80,000. 5. La Rioja, 48,800. 6. San Juan, 60,000. 7. Mendoza, 65,500. C. *Central States :* 8. San Luis, 53,300. 9. Cordova, 210,500. 10. Santiago del Estero, 132,000. D. *Eastern States :* 11. Entre Rios, 134,000. 12. Corrientes, 129,000. 13. Santa Fé, 90,000. 14. Buenos Ayres, 495,000.	Buenos Ayres, on the River Plate, 177,800 inhabitants. Rosario, on the Paraná, 23,169. Cordova, 28,520. Tucuman, 17,500. Salta, 11,716. Corrientes, 11,220. Santa Fé, 10,670. Paraná, 10,100. Salavina, 8350.	Cattle, horses, mules, sheep. Maize, wheat, garden produce. Exports: hides, furs, wool, horse hair, animal oils, tallow, meat extract, preserved meat, horns, ostrich feathers, etc.
BOLIVIA, so called after the Liberator Simon Bolivar. Republic.	1538. Conquered by the Spaniards and attached to the Viceroyalty of Peru. 1780. Transferred to that of La Plata. 1825. Declaration of Independence.	842,729 square miles. Population uncertain; estimated at from under 2,000,000 to about 2,760,000 including 245,000 civilised and 700,000 wild Indians.	9 Departments :— 1. Chuquisaca. 2. Cochabamba. 3. Oruro. 4. La Paz. 5. Beni. 6. Santa Cruz. 7. Potosi. 8. Tarija. 9. Atacama.	Chuquisaca or Sucre 24,000 inhabitants. La Paz, 76,392. Cochabamba, 40,678. Potosi, 22,850. Santa Cruz de la Sierra, 9780. Oruro, 7980.	Copper, tin, some gold and silver. Wool, bark, cacao, corn. Exports, £750,000. Cattle-breeding. Agriculture. Mining.

TABULATED SURVEY OF THE SOUTH AMERICAN STATES—*Continued.*

NAME.	HISTORY.	AREA AND POPULATION.	POLITICAL DIVISIONS.	CHIEF TOWNS.	PRODUCTS AND INDUSTRIES.
BRAZIL, so called from the red dye-wood Pao de Brazil. Empire.	1499. Discovered by the Spaniard Pinzon. 1500. Occupied by Cabral in the name of Portugal. 1580. Fell, with Portugal, to Spain, and partly occupied by the English, French, and Dutch. 1640. Again annexed to Portugal. 1822. Erected into an independent state as a hereditary constitutional monarchy.	3,287,964 square miles. 9,448,233 inhabitants in 1872, including 1,016,262 slaves	21 Provinces :— 1. Amazonas, 57,610 inhabitants. 2. Grao Pará, 259,820. 3. Maranhao, 359,000. 4. Piauhy, 202,222. 5. Ceara, 721,686. 6. Rio Grande do Norte, 233,780. 7. Parahyba, 362,560. 8. Pernambuco, 841,540. 9. Alagâas, 348,000. 10. Sergipe, 161,310. 11. Bahia, 1,283,140. 12. Espirito Santo, 82,140. 13. Rio de Janeiro, 727,576. 14. Municipium of the Capital, 274,970. 15. S. Paulo, 837,354. 16. Paraná, 126,722. 17. Santa Catharina, 159,800 18. Rio Grande do Sul, 430,878. 19. Minas Geraes, 2,009,000. 20. Goyaz, 160,395. 21. Matto Grosso, 60,417.	Rio Janeiro, 274,970 inhabitants. Bahia, 180,000. Pernambuco, 118,478. S. Luiz de Maranhao 30,000. Aracaty, 26,000. Porto Allegre, 22,000. S. Paulo, 20,000. Fortaleza, 20,000. S. Luiz de Paranahibe, 15,000.	Diamonds and other precious stones, gold, platina, palladium, iron, coal, salt. Coffee, sugar, cotton, cacao, tobacco, indiarubber, Paraguay tea, tapioca, pallisander and other dye-woods. Hides, wool. Exports, £20,000,000. Agriculture. Mining. Cattle-breeding, collection of wild produce, etc.
CHILE. Republic.	1535-1541. Conquered by Almagro and Valdivia for Spain. Till 1714 frequent wars	132,606 square miles. 2,068,000 inhabitants in 1875.	16 Provinces and 1 Colony on the Magellan Strait :— 1. Atacama, 84,000 inhabitants.	Santiago de Chilé, 115,380 inhabitants. Valparaiso, 70,438.	Copper, silver, some gold, iron, brown coal. Wheat, barley,

	with the Araucanians, English, Dutch, and Freebooters. 1810. First Declaration of Independence. 1814. Again annexed to Spain. 1817. Final Declaration of Independence. 1826. The Spaniards expelled from Chiloe.		2. Coquimbo, 160,700. 3. Aconcagua, 135,000. 4. Valparaiso, 146,730. 5. Santiago, 380,420. 6. Colchagua, 155,780. 7. Curico, 102,280. 8. Talca, 109,344. 9. Linares, } 214,324. 10. Maule, } 11. Nuble, 128,182. 12. Concepcion, 157,860. 13. Arauco, 90,158. 14. Valdivia, 28,938. 15. Llanquihoe, 44,338. 16. Chiloe, 64,150. Colony on the Magellan Strait, 750.	Talca, 17,900. Concepcion, 13,958. La Serena, 13,500. Copiapo, 13,380. Quillota, 10,150. Chillan Nuevo, 9780. All according to the Census of 1865.	pulse, fruits, potatoes. Wine, timber. Cattle. Value of exports in copper, silver, corn, flour, wool, hides, £7,000,000 Agriculture. Cattle-breeding. Mining. Fisheries. Commerce.
COLOMBIA, formerly New Granada. Republic.	1499. Visited by Alonso de Ojeda. 1508. Settled. 1536-7. Conquered by the Spaniard Gonzalo Ximenez de Queseda, who subdued the civilised Chibchas. 1718. Organised as a Viceroyalty. 1811. Declaration of Independence jointly with Ecuador and Venezuela. 1831. Constituted an independent republic.	504,773 square miles. 2,913,343 inhabitants, including (1871) 126,000 independent Indians; 1,527,000 whites, and half-caste whites; 447,000 half-caste Indians; 90,000 Africans; 466,000 half-caste Indians and Negroes.	9 States and 4 National Territories :— 1. Magdalena, 85,255 in. 2. Bolivar, 257,100. 3. Panamá, 220,542. 4. Cauca, 435,080. 5. Antioquia, 365,974. 6. Santander, 425,428. 7. Bojaca, 482,874. 8. Tolima, 230,890. 9. Cundinamarca, 409,620. *a.* S. Andres, 3530 *b.* Bolivar, 7750. *c.* S. Martin, 4000. *d.* Casanaro, Grajira, Sierravada, Motilones.	Santa Fé de Bogotá, 50,000 inhabitants. Medellin, 30,000. Socarro, 20,000. Panamá, 18,400. Pamplona, 11,000. Antioquia, 10,000. Mompox, 10,000. Cartagena, 7800. Tunja, 5000.	Silver, gold. Tobacco, coffee, dyewoods, indigo, hides, bark, cotton, india-rubber. Agriculture. Mining. Straw hats. Cattle-breeding. Commerce. Large transit trade across Isthmus of Panamá.

TABULATED SURVEY OF THE SOUTH AMERICAN STATES—*Continued.*

NAME.	HISTORY.	AREA AND POPULATION.	POLITICAL DIVISIONS.	CHIEF TOWNS.	PRODUCTS AND INDUSTRIES.
ECUADOR, so called because lying on the Equator. Republic.	Formed part of the empire of the Incas, after the overthrow of which it formed part at first of the Viceroyalty of Peru, and afterwards of that of New Granada. 1831. Declaration of Independence.	248,372 square miles. Pop. 1,308,082, including 200,000 wild Indians. The Galipagos, 2950 sq. miles, uninhabited.	Departments and 10 Provinces :— 1. Imbabura. 2. Esmeraldas. 3. Pichincha. 4. Manabi. 5. Leon. 6. Guayas. 7. Chimborazo. 8. Cuenca. 9. Loja. 10. Orienta.	Quito, from 35,000 to 80,000 inhabitants. Guayaguis, 20 to 25,000 Cuenca, 25,000. Tacunga, 15 to 20,000. Riobamba, 16 to 18,000.	Cacao, cotton, tobacco, bark, caoutchouc, wheat, potatoes, coffee, fruits, wool, hides. Exports, £850,000. Agriculture. Cattle-breeding. Wickerwork, etc.
BRITISH GUIANA.	First visited by Alonso de Ojeda in 1499. In 1580, Dutch. 1626. French settlements. 1781. Taken by the English. 1783. The Dutch settlements restored to Holland. 1803. Again taken by the English. 1815. Essequibo, Demerara, and Berbice secured by treaty to England. The rest restored to Holland and France.	76,000 sq. miles. 193,491 inhabitants (1871).	Georgetown and the counties of Demerara and Berbice.	Georgetown, 36,862 inhabitants. New Amsterdam, 5437.	Sugar, rum, molasses, coffee, timber. Exports, £2,200,000.
FRENCH GUIANA (Cayenne).		90,854 sq. kilos. 24,127 inhabitants (1871), including 17,396 whites, 2000 Indians, 768 African, 1890 E. Indian, 60 Chinese, } Coolies.	2 Cantons and 14 Communes.	Cayenne, 8000 inhabitants. St. Georges, St. Laurent, St. Louis.	Sugar, coffee, cacao, pepper, cloves, wool, dyewoods, tobacco, rum. Exports, £325,000. Plantations.
DUTCH GUIANA (Surinam).		2812 geographical sq. miles. Pop. 69,329 (1875), including 964 Europeans, 4415 Coolies, 1000 wild Indians, 7500 Bush Ne-	The Capital and 8 Provincial Administrations.	Paramaribo, 22,200 inhabitants. Gelderland. Blauwberg. Corom.	Sugar, coffee, cacao. Exports, £250,000. Plantations.

Paraguay. Republic.	1527. The Paraná explored, followed by Spanish settlements. 1608. The first Jesuit missions, till 1768 conducted to the great benefit of the Indians. After the suppression of the order, Paraguay formed a province of La Plata. 1811. Declaration of Independence.	57,303 sq. miles. Pop. 221,080 (1873) — *i.e.*, 68,253 males, 152,826 females, the disparity being due to the disastrous war of 1864-1870 with Brazil, La Plata, and Uruguay. The pop. in 1857, previous to the war, was 1,337,430.	23 Departments, with capitals of the same name.	Asuncion 48,000 inhabitants. Villa de Salvador. Villa de Concepcion. Villeta. Villa del Pilar. Villa Rica, 12,000. Curuguaty.	Corn, rice, tobacco, hides, Paraguay tea, sugar, manioc, timber. Southern fruits. Exports, £275,000 Cattle-breeding. Agriculture.
Peru. Republic.	Old civilised country. 1531. First visited by Pizarro and Almagro, and 1533 conquered by them. Till 1820 a Spanish Viceroyalty. 1821. Declaration of Independence. 1826. The Spaniards expelled from Callao, their last Peruvian possession.	503,364 square miles. Pop. 3,199,000 (1871), of which 57 per cent are aboriginal Indians, and 23 per cent half-castes.	16 Departments and 2 Provinces :— 1. Piura, 14,000 inhabit. 2. Amazonas, 44,000. 3. Loreto, 58,000. 4. Caxamarca, 273,000. 5. Libertad, 56,000. 6. Ancachs, 31 ,000. 7. Junin, 282,000. 8. Huanuco, 90,000. 9. Cuzco, 464,000. 10. Ayacucho, 210,000. 11. Huancavelica, 160,000. 12. Lima, 350,000. 13. Ica, 68,000. 14. Arequipa, 200,000. 15. Puno, 305,000. 16. Moquegua, 85,000. *a.* Callao, 40,000. *b.* Tarapaco, 25,000.	Lima, 160,000 inhabitants. Callao, 20,000. Cuzco, 40,000. Arequipa, 30,000. Cerro de Pasco, 13,000. Caxamarca, 12,000. Tacna, 11,900. Arica, 5000. Truxillo, 8000.	Guano, saltpetre, borax, copper, silver, wool, hides, sugar, rum, corn, bark. Exports, £6,700,000. Agriculture. Mining. Cattle-breeding. Commerce.

TABULATED SURVEY OF THE SOUTH AMERICAN STATES—*Continued.*

NAME.	HISTORY.	AREA AND POPULATION.	POLITICAL DIVISIONS.	CHIEF TOWNS.	PRODUCTS AND INDUSTRIES.
URUGUAY, formerly Banda Oriental, Cisplatina, and also Monte Video.	In 16th century attempts made by the Spaniards of Buenos Ayres to form settlements. 1679. The Portuguese founded the colony of Sacramento, but further permanent colonisation prevented by the Charuas Indians. In 18th century wrested by Spain from Portugal, and annexed to La Plata under the name of Banda Oriental. 1825. Declaration of Independence.	73,538 sq. miles. Pop. 400,000.	13 Departments :— 1. Salto. 2. Tacuarembo. 3. Cerro Largo. 4. Maldonado. 5. Minas. 6. Duranzo. 7. Florida. 8. Canelones. 9. Monte Video. 10. San José. 11. Colonia del Sacramento. 12. Soriano. 13. Paysandu.	Monte Video, 105,926 inhabitants. Maldonado. Colonia, Fray Bentos, Paysandu, Salto Oriental, all under 10,000.	Hides, tallow, horns, sheepskins, dried meat, meat extract. Wool. Exports, £2,800,000 Cattle-breeding.
VENEZUELA, so called from a place here built by Ojeda, like Venice, on the water, and by him	1498. North coast discovered by Columbus. 1499. First visited by Ojeda, and by him named Tierra Firma and Castilla del Oro. 1811. Declaration of Independence.	403,261 square miles. Pop. 1,784,194, including 180,000 Indians.	In 1863 divided into 21 States :— 1. Zulia. 2. Falcon. 3. Yaracui. 4. Carabobo. 5. Bolivar. 6. Caraccas.	Caraccas, 48,900 inhabitants. Valencia, or Tacarigua, 28,594. Barquisimeto, 25,664. Maracaybo, 21,954. Maturin, 13,000.	Coffee, cacao, cotton, indigo, balsam, hides, tobacco. Exports, £1,000,000. Plantations. Cattle-breeding.

named Venezuela.	1831. Separation from Columbia and Ecuador.		7. Barcelona. 8. Cumana. 9. Guzman Blanco. 10. Nueva Sparta or Margarita. 11. Maturin. 12. Guayana. 13. Apuro. 14. Guarico. 15. Cojedes. 16. Barquisimeto. 17. Truxillo. 18. Portuguesa. 19. Guzman. 20. Zamora. 21. Tachira.	San Carlos, 10,420. Cumana, 9427.

INDEX.[1]

Aborigines of Cuba, 159
Acapulco, 46, 74
Acatenango, volcano, 104
Aconcagua, 205
Acoyapo, Rio, 131
Acrocinus longimanus, 128
Adalbert of Prussia (Prince), 255
African negroes in West Indies, 150
Agave Mexicana, 52
Aguas Buenas, 79
Aguas de Comangillas, 79.
Agua Verde, Lago de, 8
Agucate, 137
Ahuehuetes, 61
Alajuela, 138, 139
Albemarle island, 329
Alcantara, 427
Algarrob forests, 269
Alligators in San Juan river, 126
Alotepeque, 102
Alpaca, 357
Altaplanicie of Bolivia, 364
Altar volcano, 213
Amatique gulf, 93, 98
Amargoso bark, 307
Amazons, delta of the, 237
  estuary, 190
  fauna and flora of, 247
  forest scenery of the, 238
  length of navigation on, 242, 246
  Lower, 240
  navigable length of, by nearest route to Lima, 363
  region of the, 236
  river system, 197
  Upper, 241
  Upper, forest of the, 241
Ambalema cigars, 318
America, Central, 1
  area of, 1
  coast lines of, 2
  configuration of interior of, 3
  gulfs of, 3
  islands of, 3
  peninsulas of, 2
America, South, general description of, 189, 300
Amucu, lake, 198
Anaconda, 230
Anahuac, Cordillera de, 8
  plateau of, 10, 69, 77
Andes, description of, 195
  eastern terraces of, 196
  extent and main divisions of, 202
Anegada, 178
Angeles, Cerro de los, 8
Angostura, 235
Anguilla, 182
Antigua, 182
Antioquia, population of, 323
Antisana, 213
Apaches, 27
Appun, C. F., 437
Apuré river, 233
  llanos or pampas of the, 225
Aquiry river, 244
Aragua-guazu, 268
  valley, 311
Araguay river, 243
Arana, Don Benito, 362
Araucania, population of, 381
Araucaria brasiliensis, 254
Arauca tribe, 221
Arawak Indians, 416, 417
Arbol del noche triste, 62
Archidona, 216
Arequipa, 209
Arica, 347
Arinos river, 243
Argentine Confederation, disputed boundaries of, 385
  inhabitants of the, 388
  fossil animals of the, 386
  immigration from Europe, 389
  landed proprietors in the, 390
  minerals of the, 385
  exports and imports of, 395
  industries of, 396
  material progress of, 395
  population of, 396
  railways of, 395
Aroa, copper mines of, 309
Artibonite river, 167
Aruac Indians, 416
Asphalt lake in Trinidad, 184
Aspinwall, 318, 319, 321
Assuay, 216
Asuncion, 402
Atacama desert, 199
Atitlan, volcano, 104
Atlaco, Rio, 70
Atliaca, 79
Atrato, 129
  valley, 219
Atures, waterfalls of, 233
Auchenia huanaco, 357
  lama, 357
  vicunia, 357
Aullagas, lake, 198, 365
Aurora, 191
Aymara Indians, 355, 366
Aysen river, 276
Azores, emigration from, to Brazil, 418
Aztecs, 26

Bachinaba, Cerro, 9
Bahamas, 141, 143
Bahia, 428
Bahia Blanca, 191
Bahia, negroes in, 422
  population of, 429
Balsam of Peru, 119
Baños, 216
Baranquilla, 321, 323
Barbadoes, 182
Barbuda, 182
  wild game in, 149
Barley in Mexico, 76
Barquisimeto, 222
Barranca de Beltran, 52
Barrancas, 64
  description of, 51
  of Guatemala, 101
  of Mexico, 5
Basques in Buenos Ayres, 389
Basse Terre, 180, 182
Bates, Mr., 237
Batrachians, tailed, absent from the West Indies, 148
Bay islands, 117

[1] The Appendices, which relate exclusively to special subjects, have not been included in the Index.

Belize, 93
river, 94
Belt, Mr., 124
Belmonte, Rio de, 232
Beni river, 244
Berberis Darwinii, 200
Berbice, 438
Bernardo, Cerro San, 8
Birds of Brazil, 411
of the Galapagos Islands, 329
of West Indies, 148
Bixa orellana, 411
Black River, 165
Black vomit in Mexico, 74
Blewfields, 124
river, 122
Blue Mountains, 165
Blumenau, 427
Blowpipe, 341
Boddam-Wetham, Mr., 102
Bodegas, 332
Bogotá, altitude of, 324
district, 217
projected railway from Honda to, 323
Rio, 217
Bojaca, 323
Bolivia, area of, 364
articles of export from, 369
population of, 364
Bolivian Andes, 206
plateau, 203
Bolson de Mapimi, 8, 15
Bolsones of Peru, 210, 353
Botocudos, 417
Brazil, abolition of slavery in, 424
area of, 409
absence of large game in, 410
civilised Indians of, 414
climate of, 259
coffee produce of, 412
diamond fields in, 412
fruits of, 412
general configuration of, 251
Germans in, 426
government of, 433
minerals of, 412
population of, 413
religion of, 433
schools in, 435
scientific and literary institutions in, 435
slaves of, 413
vegetable products of, 411
wild Indians of, 415
wood, 411
Brazilian forest, 254, 255
pine, 254
Brazilio-Guarani Indians, 415
Bromidos of Guanaxuato, 79, 80
British Honduras, 93
Bromelia chrysantha, 307
Brounea grandiceps, 307
Brown, Mr. C. B., 223, 437, 439
Brusque, 427
Buenavista, Cerro, 8
Buenos Ayres, 390
periodicals of, 395
Burton, Captain R. F., 257
Buys-Ballot, 146

CAÁ-POEIRA, 255
Caballeria of Havana, 160
Caballos, Port, 114
Cabañas cigars, 157
Cacaó cultivation in Ecuador, 339
in Guatemala, 102
of Venezuela, 306
tree, natural home of, 306
Cacti in Bolivia, 207
Cafuso, half-caste, in Brazil, 425
Caioás, 417
Cajones, 200
Calamahue, Mount, 40
Calderas, port of, 189
Calentura, in Mexico, 47
Callao, 347, 350
California, Lower, 37
area of, 37
climate of, 38
geological formation of, 38
inhabitants of, 41
mineral wealth of, 44
mountain system of, 40
rivers of, 40
sea-fowl of, 48
Campos de Parecis, 243
Cañas, Rio de, 221
Canastra, Serra da, 257
Candellaria, 266
Canelos, 216
Cape Horn, 202
Capoeiragem, 422
Caraccas, 222, 311, 313, 315
public library of, 313
university of, 312
Caracoles, mines of, 374
Carcanes, 27
Caribbean Sea, depth of, 162
Caribe fish, 231
Cariboco, half-caste, in Brazil, 425
Caribs, 99, 124, 149, 437
Carmen, island, 42
Caroni, gold mines on the, 309
Caroni river, 436
Carpenter bird, 105
Carretero grass, 228
Carrizo, Sierra del, 7
Cartago, 138, 139
Cartagena, 322
Casa del Gobernador at Uxmal, 90
Casa de Palomas at Uxmal, 90
Casino Español, 160
Casiquiare river, 232, 245
Castillo, 127
Castilloa elastica. 128
Catamarca, 206
mineral products of, 386
Cattle-breeding in Cuba, 157
Cauca, valley of the, 216, 219
population of, 323
Cauto del Embarcadero, 152
Cauto, Rio, 152
Cayambe Urcu, 213
Cayapa, Serra, 243
Cayenne, description of, 440
Caymans in Ecuador, 338
Ceará, 254
Celaya, 59
Cempoaltepec, Cerro of, 5
Central America, Indians of, 18
inhabitants of, 12
mountains and tablelands of, 3
Cerro del Altar, 222
Cerro San Juan, 7
Cervus antisensis, 200
Cervus chilensis, 200
Chamalari, 212
Chandless, Mr., 244
Chapultepec, 61
Charles Island, 329
Chatham Island, 32
Chenna Islands, 282
Chetumal, 93
Chicha, 355
Chichimequillo, 79
Chichinecs, 27
Chico river, 278
Chilian Cordillera, height of, 205
Chilian range, 204
Chilé, aristocracy of, 384
elementary schools of, 383
emigration from, 381
finances of, 383
geological features of, 373
inhabitants of, 379
land question in, 381
population of, 381
railways in, 382
society in, 380
telegraphic system of, 382
Chiloe, 192
Chilpantzingo, 75
Chimborazo, 212, 332
Chimbo valley, 332
Chinampas, 62
Chinese coolies in Cuba, 158
Chinese in Lima, 351
Chiquihuite, 64
Chiquitos, 268
Chiquitos Indians, 369
Chitalon, 104
Chitchen-I'tza, 89
Chloephaga Magellanica, 279
Chontales, climate of, 123
gold mines of, 122
Chupat river, 279
Chuquisaca, 367
Cibanegs, 149
Cibao ranges, 167

Cæsalpinia braziletto, 226
echinata, 411
Cigar manufactories of Cuba, 157
Cinchona calisaya, 211, 332
succirubra, 332
Ciruelitas, 138
Citlaltepetl, 6, 65
Clergy, native, of Peru, 356, 357
Climbing animals, 248
Cobija, 369
Coca, 368
Cochabamba, 368
Cochimas, 28
Cockburn Channel, 204
Coco Indians, 416
Cocomes kings, 90
Codazzi, Agostino, 308
Coffee plantations in Guatemala, 102
Coffee produce of Costa Rica, 137
of Cuba, 156
Cofre de Perote, 6, 64, 65
Cola acuminata, 307
Colimies, 28
Colombia, civil wars in, 326
Cordilleras of, 216
cost of land-carriage in, 324
foreign trade of, 326
population of, 323
revenue of, 326
telegraphs in, 325
United States of, 317
want of proper highways in, 324
Colon, 318
Colorado branch of the San Juan, 125
Coluguape lake, 279
Colima, 47, 50
volcano of, 48
Comandu, 42
Comayagua plain, 112
Sierra de, 113
Conchali, 375
Conductas, or convoys of silver, in Mexico, 58
Congrehoy range, 114
Contas, Rio, 252
Coolies in Peru, 352
in Trinidad, 187
Copacavana, 365
Copan, dead city of, 115
Copernicia tectorum, 227
Copper in Brazil, 413
in Mexico, 81
Coral tree, 132
Corcovado Gulf, 204
Cordillera Real, 364
Cordilleras, non-continuity of, with North American ranges, 3, 196
Cordova, 262, 390
mineral products of, 386
ranges of, 385
Corentyne river, 436, 438
Corrientes, 390
Cortes, Bay of, 43
port, 114
Costa de Balsamo, 119
Costa Rica, mineral wealth of, 137
population of, 133
public debt of, 139
railway in, 139
volcanic system of, 136
Cotton cultivation in Peru, 359
exportation of, from Venezuela, 306
Cotopaxi, 213, 214
Cotuy, 167
Couto de Magalhaes, Dr. José, 243
Couvade, 342
Cozumel, island, 89
Crans, Indians, 416
Craspedocephalus atrox, 249
Creeping plants, 247
Crens, Indians, 416
Creoles of Central America, 20
in Brazil, 425
Cuba, area of, 152
climate of, 144, 153
cultivated area of, 156
forests of, 156
gardens of, 155
harbours of, 153
mountain ranges of, 152
political divisions of, 154
population of, 157
products of, 156
railways in, 154
Cubilete, Mount, 79
Cuenca, altitude and climate of, 333
Cuesta de San Juan, 5
Cujajo, 307
Cundinamarca, 323
Cordillera of, 217
Cupica bay, 129
Cuyaguatejo river, 156
Cuyutlan, Laguna de, 47
Cuyutlancillo, 49
Cuzco, 353, 354
climate of, 355
mountain knot of, 211
range, 211
Cyclones, cause of, 145
Cygnus coscoroba, 279

Danish islands in West Indies, 178
Darien, 320
Gulf of, 190
surveys for ship-canal across, 130
Darwin, Mr., 204, 292, 295, 297
Defoe, 377
De la Armeria, river, 49
Del Oriente, district of Ecuador, 339
Demerara, 439
Desaguadero, 198
Rio, 365
Desfontainea Hookeri, 201
spinosa, 200
Desirade, 179
Desolation Land, 290
Despoblado, 206
Desploblados of Peru, 210
Desterro, 427
Diamantina, 432
Diamond Fields of Brazil, 412
Diamonds, Brazilian, of large size, 412
Diego Garcia Polacio, 115
Doce, Rio, 252
Doguado, 130
Dominica, 182
Dona Francisca, 427
D'Orbigny, A., 415
Dragones, 263
Durand, l'Abbé, 257

Earthquakes in Mexico, 80
Ecuador, area and population of, 328
army of, 344
Cordillera of, 212
eastern slopes of Andes in, 196
education in, 344
theocratic government of, 342
El Dorado, 436
El Volador, rancho, 221
Emigrants, German, in Venezuela, 308
Emigration from European countries, 381
Ernst, Dr., 312
Erythrina crista galli, 265
Erythroxylon coca, 368
Escuda, Rio, 137
Escuintla, 108
Esmeralda, 232
Espinhaço, Serra do, 252
Espino, plain of, 113
Espirito Santo Bay, 93
Essequibo river, 436, 439
Esteros of the Llanos, 229
Estrella do Sul, diamond, 412
Eunectes murinus, 249
Extract of meat manufacture in Uruguay, 404

Falkland Islands, 191, 296
climate of, 297
Fiords, 192
Fiord-like character of Patagonian and Chilian coast, 192
Fitz Roy, Captain, 292
Floating gardens of Mexico, 62
Floreana, 329
Flores, island, 98
Floripondio, 341
Fonseca, bay of, 114
Francia, Dr., 399
Fray Bentos, 404
French in Brazil, 427
French islands in West Indies, 179

French line of ocean steamers, 311
Fria, Sierra, 8
Frio, Rio, 131
Frisol, rancho, 221
Froward, Cape, 293
Fuego, volcano of, 104

Gabb, Professor W. M., 136
Galapagos, indigenous animals of, 329
Galapagos Islands, description of, 328
Galeros hills, 225
Gallenga, Mr. A., 161
Gamelote grass, 227, 228
Garcia Moreno, 342
Gauchos, the, 392
Gayatacas Indians, 416
Geckos, lizards, 249
Geiger, Mr. J. L., 46
George Town, 438
German settlements in Brazil, 426
Gês, Indians, 416, 417
Goascoram, river, 112
Gold in Guiana, 436
in Mexico, 81
in Venezuela, 309
Golfo Dolce, 99
Gonave, bay of, 167
Gorges in the Andes, 196
Gorjaz, 256
Granada, city of, 181, 132
Granadilla grass, 228
Gran Chaco, 262
birds of, 269
night scenery in the, 270
vegetation of, 269
Grenada, 182
Graytown, 124, 125
Grande, Rio, 8
Grande, Rio, of Mexico, 55
Grande Terre, 179
Gran Piedra, 152
Grasses, kinds of, on the Llanos, 227, 228
Great Bahama bank, 141
Guaca, 307
Guacanayabo, gulf of, 152
Guacha maca, poison, 231
Guadalaxara, 53
Guadeloupe, 179
Guajira, 190
Gualan, 100
Guamani range, 215
Guanaco, 208, 276, 357
Guañape islands, 359
Guanaxuato, 8
and its mines, 57
Guaniguanico range, 156
Guano deposits, 358
revenue from, in Peru, 360
trade, 358
Guantanamo bay, 152, 153
Guaporé Itenez, river, 244
Guaranda, 332
Guarani Indians, 369, 398, 399
language, 399
Guatemala antigua, 107
area of, 97
birds of, 100
city, 106
climate of, 101
population of, 97
products of, 101
society in, 109
volcanoes of, 104
Guaviare river, 238
Guayac tree, 270
Guayacan, 226
Guayaquil, 330
gulf of, 193
Guayas, 331
Guaycurus, Indians, 416
Guazuma ulmisotia, 307
Guchilaqui, 77
Guck, Indians, 416
Guemul, 200
Guerens, Indians, 416
Guiana, British, area of, 438
climate of, 438
Guiana, extent of, 436
French, 440
Guichipila, Rio, 8
Guiriri ducks, 229
Gunnera scaba, 200
Guzman Blanco, president of Venezuela, 315

Hamburg-American Steamship Company, 311
Havana, 159
Havana, harbour, 153
scarcity of women in, 162
social life in, 162
Hayti, area of, 167
barbarous state of negroes in, 170, 172
general configuration of, 166
historical sketch of, 168
population of, 170
Hazard, Mr. S., 170
Hacha, Rio de la, 220
Hernandez Cordova, 131
Hiaquis, 27
Hieronymus, Dr. George, 263
Hispaniola, 166
Honda, 323
Hondo de Chetumal, river, 94
Honduras, area of, 112
British, 93
area of, 94
physical features of, 112
population of, 115, 94
table-land of, 4
Hood Island, 329
Hoorn, William Corneliszoon Schouten, 290
Horses in Cuba, 157
of Brazil, 410
Host, Major, 208, 270
Hot springs, Mexico, 79
Howler monkeys, 187
Huallaga river, 197
Huanaco, 357
range, 211
Huanillo Islands, 359
Huao, the, 379
Huatany river, 354
Humboldt, 8, 213, 233
Humuya river, 112
Hura crepitans, 179
Hurricanes, 144, 145

Ibarra, altitude of, 216
Icas, 28
Ilha das Cobras, 430
Iliniza, 212
Illapel, 375
Illimani, 367
Immigration question in Costa Rica, 140
Indefatigable Island, 329
Independencia Bay, 359
Indian tribes of Brazil, great number of, 415
Indiarubber trade of Nicaragua, 127
trees, 128
Indigo in Venezuela, 306
Indios Barbaros of Central America, 15
Indios Mansos of Central America, 14
Inter-oceanic canalisation, 129, 320
Iquique, 347
Irazu, Mount, 136
Isla Rasa, 43
Islay, 347
Istapan, 79
Italians on the River Plata, 389, 390, 392
Itatiaia, 252
Izabal river, 99
village, 99
Izalco, Mount, 119
Izamal, 89
Iztaccihuatl, 6, 60, 69

Jacitara, climbing palm-tree, 248
Jacob le Maire, 290
Jalapa, 64, 75
Jamaica, general features of, 164
minerals in, 165
population of, 165
revolt of negroes in, 165
James Island, 329
Jararaca, 249
Jardines del Rey y do la Reyna, 154
Jauru river, 267
Javali, 123
Javary river, 244
Jesuits in Paraguay, 390
in S. America, 416
Jesus Maria, 9
Jivaros Indians, 341, 345
Juan Fernandez, 377
Jujuy, petroleum wells in, 386
river, 269
Jupati palm-tree, 238
Juris Indians, 417

Juruoca, 252
Jutahy river, 244

Kajeteur Falls, 439
King Charles' Southland, 290
Kingston, 166

Laberinto de doze Leguas, 153
La Brea, 184
Ladinos of Central America, 19
Lagoon formations in Rio Grande do Sul, 191
Lagos, 57
La Guayra, 310, 311, 313
Laimones, 28
Lakes in South America, 198
in South American river valleys, 198
Lambayeque, 347
Lambedora grass, 228
La Paz, 44
city, 366
La Plata, climate of, 386
La Souffrière, 180
Latin races in South America, 299
Latiriquiqui, 269
Lavayen river, 269
Lavega, 167
Leeward Islands, 142
Lempa river, 118
Lengous Indians, 416
Leniache, 378
Leogane, bay of, 167
Leon, city, 131
lake, 131
Lepaterique, Sierra de, 113
Leperos of Mexico, 30
Leprosy in Jamaica, 166
Lerma, Lago de, 55
river, 59
Les Saintes, 179
Lesseps, M. de, 131
Lesser Antilles, 141
Llais, Edmund, 257
Lima, 209
architecture of, 350
foreign element in, 351
population of, 368
Limay river, 205, 280
Limon, Puerto, 139
Lingoa geral of Brazil, 416
Lipez range, 268
Livingston village, 99
Llama, 357
Llanos, birds of, 229
of the Orinoco, 225
Llanquihue, 205
Lobillo Islands, 359
Lobos Islands, 359
Loja, hills of, 212
Lopez I., 399
Lorenz, Professor, 263
Loreto, 42
archipelago of, 43
Los Altos of Guatemala, 101
Lotteries, public, in Mexico, 35
Lucayas, 141
Lull, Commander, 130

Macabi Islands, 359
Macaca range, 152
Macaray, 225
Macas, highway to, 345
Maclura affinis, 411
Madeira, emigration from, to Brazil, 418
Madeira river, rapids of the, 368
river, 241, 244
Madera, peak, 129
Madre, Sierra, 9
Magas, 42
Magdalena Bay, 40, 42
river, 198, 323
river, steam navigation on the, 321
valley, 219
Mahaica, 438
Mahogany tree and trade, 94
Maize in Venezuela, 306
Malacata, Cuesta de, 8
Malpais de Atlachayacatl, 70
Mameluco, half-castes in Brazil, 425
Mamore river, 244
Managua, 131
Manzanas, 280
Manseriche rapids, 246
Mantiqueira, Serra de, 252
Marabios, 134
Maracaybo, lake of, 190
Marajó Island, 237
Marañon river system, 197
Mariagalante, 179
Maricopas, 42
Markham, Mr. C. R., 211
Maroni river, 441
Maroon negroes, 166
Martinez, Sierra, 7
Martinique, 180
Martius, Von, 415
Mas à fuera Islands, 377
Masaya, lake and volcano, 132
Mas à tierra Islands, 377
Matanzas harbour, 153
railway, 154
Maté, 398, 412
Matto Grosso, 256
diamonds of, 412
Mauch, Karl, account of Porto Rico, 174
Mauhés Indians, 417
Mauritia palm-trees, 238
Maximilian, Emperor, 59, 61, 84
Maya fruit, 307
Indians, 93
Mayapan, 90
Mayas, 27
Maypures, waterfalls of, 233
Mayne, Captain, 293
Mayro, 362
Mazanillo, 46
Mazatlan, 46
Medanos of the Llanos, 228
Mendoza, 206, 390
mineral products of, 386
Mercado, Cerro del, 9
Mercedario, Cerro del, 205
Merida, 89
University of, 312
Mesas, of Venezuelan Llanos, 226
Mesopotamia, Argentine, 263
South American, 263
Mestizoes in Brazil, 424
in Spanish States of South America, 300
of Central America, 18
Meta river, 225, 232, 233
Mexican children, 52
Indian tribes, 26
oak, 74
towns, general aspect of, 28
women, ignorance of, 38
Mexicans, food of, 33
Mexico, area of, 24
brigandage in, 34
city, 59
city, and its inhabitants, 30
climate of, 72
foreigners in, 30
government of, 32
highways of, 51
Indian languages of, 26
length and width of, 24
length of coast lines of, 24
national debt of, 25
political disorders of, 33, 35
population of, 25
rainfall in, 78
seasons in, 77
volcanic system of, 6
Mezcal, 53
Micadia gonoclada, 307
Michoacan, 6
Minas Geraes, 256, 259
diamonds of, 412
tea cultivation in, 412
Minas Negroes, 422
Minchinmadiva, 204
Minerals in Mexico, 30
Mineral springs in Mexico, 30
Miranhos, Indians, 417
Mixtecos, 27
Mocatama, 222
Mollendo and Puno Railway, 361
Mombacho, volcano, 132
Mona Passage, 167
Monkeys in Amazons region, 249
Monquis, 27
Montaña de Dota, 16
of Ecuador, 339
of Peru, 210, 211
Monte Bufa, 9
Montego, 164
Monte Video, 406
population of, 407
Montserrat, 182

Moraes, Eduardo José de, 257
Moronn river, 241, 246
Morro de Papagaio, 252
Mosquitia, king of, 124
Mosquito Coast, 123
Motagua river, 101
Moxos Indians, 369, 370
Mulattoes in Brazil, 424
Mulege, Bay of, 40, 42, 43
Muncuna puriens, 307
Mundrucus, 417
Musters, Lieutenant, 276

NAHUEL-HUAPI lake, 205, 280
Naiguata, 223
Napos Indians, 340
Napo river, 196, 241, 339
Narborough Island, 329
Nauhcampatepetl, 6, 64
Negro population of Cuba, 159
Negroes, free, in Lima, 352
number of enfranchised, in Brazil, 422
Nepe, harbour, 153
Nevada de Meridá, 219
Nevado de Castello, 263
Nevado de Toluca, 6
New Granada, 317
Nicaragua, fauna and flora of, 126
geological features and configuration of, 121
lake, 128
political condition of, 134
products of, 122
project of ship-canal across, 129
Nicoya, gulf of, 139
Niguas, 105
Nopal fences in Mexico, 52
Norte, Rio Grande del, 10
"Northers" in Mexico, 74
Nuevitas, harbour, 153

OAK, evergreen, of Mexico, 75
in Mexico, 65
Oaxaca and Anahuac, plateaus of, 4
Ocho Rios, 164
Ojo de Zamuro, 307
Olinda, 427
Ometepec peak, 129
Omoa range, 118
Orgãos, Pico dos, 252
Orinoco river, description of, 232
river system, 197
scenery, 234
Orizaba, 6
peak of, 65, 66
Orkeke, 277
Oroya railway, 361
Orozco y Berra (Don Manuel), on Mexican languages, 26
Orton, Mr., 213
Oruro, 367
Osorno, volcano, 205
Ostrich of Patagonia, 277
Otomis, 27
Otuquis, 269
Ozama river, 171

PABELLON DE PICA, 359
Pachitea river, 246, 362
Padamo river, 232
Paez, Don Ramon, 225
Pairas, 138
Paja Brava, 208
Palcazu river, 362
Palma, Capé, 45
Palma de Abanico, 227
Palma de Cobija, 227
Palma de Sombrero, 227
Palmares, forests, 269
Palmolatla, wood, 105
Palo Santo, 270
Pampa, salt, in Bolivia, 365
Pampas, extent and configuration of the, 271
impressions produced by the scenery of the, 271
of the Apuré, 225
of Uruguay, 464-5
strange atmospheric effects in the, 273
Pampero winds, 386
Panamá, 319
bay of, 193
Isthmus of, 317
population of, 323
railway, 318, 319
Pão de Azucar, 430
Papallacta, 216
Papagayo valley, 74
Pará, 427
river, 239
Paraguari, 402
Paraguay and its tributaries, 267
boundaries of, 397
configuration of, 397
exports and imports of, 398
population of, 398
products of, 398
river, length of navigation on, 264
tea, 398, 412
Paraguana, 190
Parahyba, 427
Paramaribo, 440
Paramo de la Suma Paz, 225
Paranahyba, 266
Paraná de las Palmas, 266
delta of the, 265
-Paraguay river system, 266
periodical floodings of the, 266
province of, 260
river, 262
length of navigation on, 204
vegetation of, 387
Upper, 267
Parexis, Indians, 416, 417
Paria, 190
Parime, Sierra de, 197, 223
Parque de Isabel, 160
Parras, Lago, 8
Pasco range, 211
Paseo de Isabel, 160
de Tacon, 160
Pashiuba palm, 211
Passés, Indians, 417
Pastaza river, 197, 241
Pasto, altitude of, 216
Patagones, 280
Patagonia, brine lakes in, 281
extent and configuration, 275
flowers of, 280
Patagonian coast, 191
fox, 277
mountain system, 202
Patagonians, dress, habits, and amusements of, 284
height of, 283
Patos, Sierra de los, 9
Paulistas, 419, 426
Paulo Affonso falls, 257
Payara fish, 231
Payta, 347
Peat in Tierra del Fuego, 292
Peccaries in Ecuador, 338
Pechilinque, bay of, 42
Penedo, islands of, 158
Pepa de Cedron, 307
Pepe de Cola, 307
Philippi, Professor, 199
Peregrino, valley, 74
Pericues, 27
Pericos, Cuesta de, 8
Pernambuco, negroes in, 422
population of, 427
Peru, arid districts of, 347
area of, 346
aspects of nature in, 346
climate of Pacific seaboard of, 209
coast line of, 192
coast valleys of, 209
eastern slopes of the Andes in, 197
external debt of, 363
fauna of, 357
government of, 359
railways in, 360
ranges of, 208
Pertuiset, M., 271, 295
Peruvian bark in Venezuela, 306
trade in Ecuador, 332
Peten, lake, 97
Petropolis, 427
Pic de Giganta, 40
Pichincha, 112
Pico Blanco, 8
Helado, 51
Pilaya Rio, 268
Pilcomayo, 197
Rio, 265, 268
Pinahuizapan, 65
Pinus occidentalis, 76
Pirapora, 258
Pisco, 347

Pizarro, 330
Planchon pass, 206
Plancho, plains of, 113
Plata, river, formed by confluence of Paraná and Uruguay, 264
river, width of, 265
river system, 197
Plateau of Bolivia, 366
Plate, river, 191, 261
Playa de Xorullo, 6
Pointe-à-Pitre, 179
Polakowsky, Dr. H., 138
Popayan, 216
Popocatepetl, 60, 69
ascents of, 70, 71
Pordioseros of Mexico, 80
Porta Dibull, 221
Port au Prince, 167
Port Louis (Falkland Islands), 297
Porto Alegre, 427
Porto Rico, 173
population of, 174
Portuguese element in South America, 301
in Brazil, 417, 425
Potosi, 213, 367
Poyas range, 114
Prado, General, 361
Precious stones of Brazil, 413
Prickly-pear cactus, 52
Puebla, city, 69
valley of, 67
Puerto Cabello, 310
Principe, 154
Real, 117
Pulque, 53
Punas, 353
of Peru, 210
Punta Alba, 359
Arenas, 276, 293, 294
de Bernal, 7
Delgada, 7
Purus river, 244

Quebradas, 200
Queñua tree, 208
Quercus Xalapensis, 74
Queretaro, 59
Quetzal, 105
Quiché Indians, 108
Quichua Indians, 355, 368, 369
language, 371
Quijos Indians, 340
Quillota valley, 378
Quindiu, Cordillera of, 217
Quinine, 333
Quinoa, 208
Quinquina in Venezuela, 306
Quito, altitude of, 216, 334
Cordillera of, 212
fruits in, 335
population of, 336
road to, from Guayaquil, 332
valley of, 334

Rafael Carrera, 111
Raleigh, Sir Walter, 436
Ranco, 205
Rattlesnake, 231
Religion in Ecuador, 343
Rhamphocœlus passerinus, 126
Rhea Darwinii, 277
Riñihue, 205
Riobamba, 212, 216
Rio Bueno, 164
Rio Grande, 197, 266
Rio Grande do Sul, 191, 260
Rioja, mineral products of, 386
Rio Janeiro, Bay of, 430
city, 431
Rio Negro, 241, 245
(Patagonia), 275, 280
Rio Verde, 56
Rivière Salée, 179, 180
River systems, great, of South America, 196
Roraima, Mount, 224, 439
Round Hill, 123
Rosa de Montaña, 307
Rosario, 390
Royal Mail Steamship Company, 311
Ruatan, 117

Saba, 179, 182
St. Anne, 164
St. Bartholomew, 179
St. Catherine Peak, 165
St. Christopher, 182
St. Eustatius, 179, 182
St. Joseph, 190
St. Kitts, 182
St. Lazaro, Sierra de, 49
St. Lucas, Cape, 45
St. Lucia, 182
St. Martin, 179
St. Thomas, 176
St. Vincent, 182
Sainte Croix, 178
Salado, Rio, 265
Salamanca, 59
Salaverry, Lieut. Juan, 246
Salinas, Laguno de, 365
Samana Bay, 170
Saman tree, 227
San Andreas, Rio de, 221
San Antonio, 44, 123
San Antonio de los Cues, 5
San Antonio, Rio de, 221
San Antonio (R. Madeira), 244
San Benito, 123
San Carlos, 128
San Carlos river, 129
San Diego, 42
San Domingo, city, 171
general configuration of, 166
population of, 170
republic of, 169
San Dominguillo, 5
San Felipe and Santa Rosa Railway, 382
San Fernando de Atabapo, 233
San Francisco river, 198, 257
Sangay, 213
San Ignacio, 40
San José, 45, 139
San José del Cabo, 44, 45
San Juan del Norte, 124
San Juan de los Lagos, 56
San Juan de Puerto Rico, 174
San Juan de Ulua, 68
San Juan, mineral products of, 386
San Juan, river, 124
San Leopoldo, 427
San Luis, 262
bay of, 43
mineral products of, 386
ranges of, 385
San Marcos, 42
San Matias, Gulf of, 191
San Martin, Sierra, 6
San Miguel, 221
San Paulo, 256
San Pedro, volcano, 104
San Salvador, earthquakes in, 119
geological formation of, 118
politics in, 120
population of, 120
volcanoes of, 118
Santa Barbara de Samana, 171
Santa Catharina, 427
Santa Clara, Rio, 221
volcano, 104
Santa Cruz, 178, 276, 427
Santa Fé, 265, 386, 390
de Bogotá, 217
Santa Ines, 43
Santa Isabel, 427
Santa Lucia, 407
Cerro de, 378
Santa Maria de Guadalupe, 62
Santa Maria, volcano, 104
Santa Marta, 322
Sierra de, 220
Santander, 323
Santarem, 243
Santa Rosa, 221
Santiago and Curico Railway, 382
Santiago de Chilé, 377
de Cuba, 154
harbour, 153
Santiago, in San Domingo, 167
Rio Grande de, 8
University of, 383
Santo Domingo, gold fields, 121, 122
Cerro, 167
San Tomas, volcano, 104
San Ubaldo, 131
Sao Desterro, 432
Sapajou monkeys, 187
Sapi, Cordillera de, 354
Sarmiento, Mount, 203
Sarsaparilla in Venezuela, 306
Savanilla, 321
Schmarda, Ludwig, 165
Schomburgk, 223, 224, 437

Seibo trees, 265
Selfridge, Commander, 130, 320
Seripiqui, 127
Serra de Mar, 252
dos Vertentes, 252
Geral, 253
Serras of Brazil, 197
Sheep-farming in S. Brazil, 411
in Uruguay, 205
Ship-canal, 129
Sierra Madre, 7
Maestra, 152
Negra, 220
Perija, 220
Siète Lagunas, 267
Silla de Caraccas, 223
Silver in Mexico, 81
Simpson, Lieut., 276
Sinabra cedron, 307
Siphonia elastica, 128
Slavery, effects of abolition of, in Barbadoes, 183
Slavery, effects of abolition of, in Trinidad, 187
Slavery in West Indies, 150
Smilax sarsaparilla, 307
Soacha, 218
Soconusco, volcano of, 4
Solano Lopez, 399
Solimoens river, 241
Soroche, the, 855
Soulouque, 169
South America, 300
continuity of coast lines of, 190
general outline of, 189
mountain ranges of, 194
native element, predominance of, in population of, 300
South Georgia, 191
Spanish element in South America, 301
Spanish Town, 166
Squier, Mr., 346
Steam communication with West Indies and Venezuela, 311
Stephens, J. L., 89
Strait of Magellan, 290, 291
surveys and navigation of, 293
Sucre, 367
Sugar-cane in Guatemala, 102
Sugar cultivation in Barbadoes, 183
Sugar, cultivation of, in Mexico, 73
Sugar manufacture in Venezuela, 306
Sugar plantations of Cuba, 156
Sugar production in British Guiana, 439
Sugar, yearly export of, from Cuba, 156
Suicidal manias of negroes, 422
Sulaco hills, 113
Sulphur on Popocatepetl, 70
Sumpul, Rio, 118
Surinam, 440
Swiss colonies in Brazil, 427

TABACOTES, 9
Tacon theatre of Havana, 161
Tacubaya, 61
Talcahuano and Chilian Railway, 382
Talina range, 268
Tamaulipas, Sierra de, 7
Tambo river, 246
Tapajos river, 243
Tapanhuna, half-castes in Brazil, 425
Tarahumaras, 27
Tarija, 268
Tarrascos, 27
Tasco, 75
Taxodium distichum, 61
Tea cultivation in Brazil, 412
Teckel, 280
Tehuantepec, isthmus of, 4
Tehuelches Indians, 281
religion of, 287
toldos of the, 277
total number of, 282
Tele, Mount, 279
Tenochtitlan, plain of, 6
Tenoxquines, 27
Teochiapanécos, 27
Tepehuanes, Sierra de los, 9
Tepic, 76
Tequendama falls, 217, 218
Tequile, 53
Tetens, Mr., 220
Tezcoco, 60, 62
Tierra Caliente of Mexico, 73
Tierra del Fuego, discovery of, 290
flora and insects of, 291
mountain system, 202
natives of, 295
population of, 381
trees and forests of, 292
Tierra Fria of Mexico, 77
Tierra Templada of Mexico, 75
Tiger Island, 265
Tigre Island, 118
Tihoo, 89
Tijuca, falls of, 431
Tillandsia usneoides, 62
Tiliri, Rio, 137
Titicaca, Lake, 198, 210, 365
Tlaxala upland, 6
Tobacco cultivation in Cuba, 156
Tobago, 182
Tocantins river, 242
Tolima, 324
Toluca, uplands of, 6
vale of, 77
Tonila, 51
Tortillas and frijoles, 32
Tortola, 178
Totonaques, 27
Toussaint l'Ouverture, 168
Tovar, German colony of, 303
Tras-Andina, 246
Tres Montes, 190
Tres Virgines, Las, 40
Trinidad, 183
fauna and flora of, 187
population of, 186
Trogon resplendens, 105
Troupial, nests of, 270
Truxillo, 114
(Peru), 347
Tsonecas Indians, 281
Tucuman, 206, 390
Tulcan, 216
Tumakurak range, 441
Tunguragua, 213
Tupi-Guarani language, 400, 416
Tupi language, 400
Tupis, 417
Tupiza range, 268
Turquino Peak, 152
Turkey, ocellated, 100
Turrialba, 136
Tuxtla, 6
Tuyra river, 131

UBUSSU palm-tree, 238
Ucayali river, depth of, 362
river, description of, 246
Uchitas, 28
Ulua river, 114
Unimarca, Laguna de, 365
Uraba, gulf of, 131
Urubamba river, 246
Urucu, 411
Uruguay, physical aspect of, 404
population of, 407
river, 264
Usumacinta river, 98
Uttak range, 275
Uxmal, 89

VALDIVIA, RIO, 205
Valencia, lake, 198
Valparaiso and neighbourhood, 375
and Santiago Railway, 382
Valle d'Upar, 220
Vallesia hypoglauca, 307
Vargas, Dr. J., 318
Vega Real, 167
Vegetable-ivory nuts, 338
Vehitis, 28
Velhas, Rio das, 257, 258
Venezuela, cocoa plantations in, 305
coffee cultivation in, 304
constitution and government of, 314
ecclesiastical affairs in, 313
exports and imports of, 310
freedom of worship in, 313
highways in, 311
mining operations in, 309

Venezuela, population of, 307
revenue and public debt of, 314
steamer communication with, 311
telegraphic service in, 312
trades and manufactures in, 309
trees of, 226
vegetable products of, 304
zones of climate in, 303
Venezuelan mountain systems, 222
Vera Cruz, 62
Veragua, plateau of, 8
Verde, Sierra, 9
Vermejo, Rio, 265, 268
Vertentes, Serra dos, 252, 253
Vichada river, 225
Viejas islands, 359
Vilcamayu river, 246
Villarica, 205
Villegagnon island, 430
Vinal mimosa, 269
Virgin Gorda, 178
Islands, 178
Viscacha, 208
Volantes of Havana, 160
Volcano of fire, 104
Von Frantzius, 136
Von Scherzer, 136
Tschudi, 419, 422
Vuelta Abajo, 156

WANX RIVER, 121
Water boa, 249
Wehrdan, Robert, 377
Weinmania glabra, 307
West Indies, climate of, 144
fauna and flora of, 142
general description of, 141
geological features of, 142
indigenous animals of, 147
not continental islands, 143
population of, 149
products of, 146
West peak, 165
Wheat cultivation in Guatemala, 102
in Mexico, 76
Windward Islands, 142
Wollaston island, 194
Wulwa, 124

XAIMACA (Jamaica), 164
Xalalpa, river, 7
Xalisco, State of, 52, 53
Xalostotitlan, 56
Xamyes lagoon, 268
Xibaro, half-castes, in Brazil, 425
Xingu river, 240, 248
Xochimilco, 60
Xorullo, 7

YAQUI PEAK, 167
Yaquis, 27, 42
Yareta, 208
Yavi, 206
Yellow fever in Brazil, 429
in Mexico, 74
in West Indies, 144
Yoro, plains of, 113
Yquitos, 362
Yucatan, Indian ruins in, 89
physical aspect of, 87
population of, 87
Yucatekes in Cuba, 158
Yuna, 167
Yungas district, 367
Yuracaré Indians, 368

ZAMBOS of Central America, 20
Zaparos Indians, 341
Zapotecos, 27
Zapotlan, 53
Zapotlanejo, 56
Zunil, volcano, 104
Zygophyllum arboreum, 226

THE END.

Printed by EDWARD STANFORD, 55 *Charing Cross, London, S.W.*

STANFORD'S
COMPENDIUM OF GEOGRAPHY AND TRAVEL

FOR GENERAL READING.

(BASED ON HELLWALD'S "DIE ERDE UND IHRE VÖLKER.")

WITH ETHNOLOGICAL APPENDICES

By Professor A. H. KEANE, M.A.I.

A Series of Volumes descriptive of the Great Divisions of the Globe.

Large post 8vo. Cloth, Gilt, 21s. each. With Maps and numerous Illustrations.

EUROPE.

By F. W. RUDLER, F.G.S., and G. G. CHISHOLM, B.Sc.

Edited by Sir A. C. RAMSAY, LL.D., F.R.S.,

Late Director-General of the Geological Surveys of the United Kingdom.

ASIA.

By AUGUSTUS H. KEANE, M.A.I.

Edited by Sir RICHARD TEMPLE, Bart., G.C.S.I., D.C.L.

AFRICA.

Edited and Extended by KEITH JOHNSTON, F.R.G.S.

Fourth Edition. Revised and Corrected by E. G. RAVENSTEIN, F.R.G.S.

NORTH AMERICA.

EDITED AND EXTENDED.

THE UNITED STATES. By Professor F. V. HAYDEN, of the United States Geological Survey.

BRITISH AMERICA. By Professor A. R. C. SELWYN, F.R.S., Director of the Geological Survey of Canada.

CENTRAL AMERICA, THE WEST INDIES, AND SOUTH AMERICA.

Edited and Extended by H. W. BATES,

Assistant Secretary of the Royal Geographical Society, Author of "The Naturalist on the Amazon." Third Edition.

AUSTRALASIA.

Edited and Extended by A. R. WALLACE, F.R.G.S.,

Author of "The Malay Archipelago." Fourth Edition.

LONDON: EDWARD STANFORD, 55, CHARING CROSS, S.W.

Digitized with financial assistance from the
Government of Maharashtra
on 18 July, 2018